
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 20-F

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☐ SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number: 001-38438

Spotify Technology S.A.
(Exact name of Registrant as specified in its charter)

Grand Duchy of Luxembourg
(Jurisdiction of incorporation)

42-44, avenue de la Gare
L- 1610 Luxembourg
Grand Duchy of Luxembourg
(address of principal executive offices)

Horacio Gutierrez
Head of Global Affairs and Chief Legal Officer
150 Greenwich Street, 63rd Floor
New York, New York 10007
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered, pursuant to Section 12(b) of the Act

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Ordinary Shares (par value of €0.000625 per share)	SPOT	New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act: None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report: 184,325,957 Ordinary Shares, par value €0.000625 per share.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If "Other" has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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Certain Defined Terms

In this report, unless the context otherwise requires, references to “Company,” “we,” “us,” “our,” and “Spotify” refer to Spotify Technology S.A. and its direct and indirect subsidiaries on a consolidated basis.

Note on Presentation

Currency

All references in this report to (i) “Euro,” “EUR,” or “€” are to the currency of the member states participating in the European Monetary Union, and (ii) “U.S. dollar,” “USD,” or “\$” are to the currency of the United States. Our reporting currency is the Euro.

Presentation of Financial Information

In accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”), we prepare our consolidated financial statements on a historical cost basis, except for our securities, long term investments, Convertible Notes (as defined herein), derivative financial instruments, and contingent consideration, which have been measured at fair value, and our lease liabilities, which are measured at present value.

Non-IFRS Financial Measures

In this report, we present certain financial measures that are not recognized by IFRS and that may not be permitted to appear on the face of IFRS-compliant financial statements or notes thereto.

The non-IFRS financial measures used in this report are EBITDA and Free Cash Flow. For a discussion of EBITDA and Free Cash Flow and a reconciliation of each to their most closely comparable IFRS measures, see “Item 3.A. Selected Financial Data.”

Rounding

Certain monetary amounts, percentages, and other figures included in this report have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables may not be the arithmetic aggregation of the figures that precede them, and figures expressed as percentages in the text may not total 100% or, as applicable, when aggregated may not be the arithmetic aggregation of the percentages that precede them.

Forward-looking Statements

This report contains estimates and forward-looking statements. All statements other than statements of historical fact are forward-looking statements. The words “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “seek,” “believe,” “estimate,” “predict,” “potential,” “continue,” “contemplate,” “possible,” and similar words are intended to identify estimates and forward-looking statements.

Our estimates and forward-looking statements are mainly based on our current expectations and estimates of future events and trends, which affect or may affect our businesses and operations. Although we believe that these estimates and forward-looking statements are based upon reasonable assumptions, they are subject to numerous risks and uncertainties and are made in light of information currently available to us. Many important factors may adversely affect our results as indicated in forward-looking statements. These factors include, but are not limited to:

- our ability to attract prospective users and to retain existing users;
- competition for users and user listening time;
- our dependence upon third-party licenses for most of the content we stream;
- our lack of control over the providers of our content and their effect on our access to music and other content;
- our ability to comply with the many complex license agreements to which we are a party;
- our ability to accurately estimate the amounts payable under our license agreements;
- the limitations on our operating flexibility due to the minimum guarantees required under certain of our license agreements;
- our ability to obtain accurate and comprehensive information about music compositions in order to obtain necessary licenses or perform obligations under our existing license agreements;
- new copyright legislation that may increase the cost and/or difficulty of music licensing;
- risks associated with our international expansion, including difficulties obtaining rights to stream content on favorable terms;
- our ability to generate sufficient revenue to be profitable or to generate positive cash flow on a sustained basis;
- our ability to expand our operations to deliver content beyond music, including podcasts;
- potential breaches of our security systems;
- assertions by third parties of infringement or other violations by us of their intellectual property rights;
- our ability to accurately estimate our user metrics and other estimates;
- risks associated with manipulation of stream counts and user accounts and unauthorized access to our services;
- changes in legislation or governmental regulations affecting us;
- risks relating to privacy and protection of user data;
- our ability to maintain, protect, and enhance our brand;
- ability to hire and retain key personnel;
- risks relating to the acquisition, investment, and disposition of companies or technologies;
- tax-related risks;
- the concentration of voting power among our founders who have and will continue to have substantial control over our business;
- risks related to our status as a foreign private issuer;
- international, national or local economic, social or political conditions; and
- risks associated with accounting estimates, currency fluctuations and foreign exchange controls.

Other sections of this report describe additional risk factors that could adversely impact our business and financial performance. Moreover, we operate in an evolving environment. New risk factors and uncertainties emerge from time to time, and it is not possible

for our management to predict all risk factors and uncertainties, nor are we able to assess the impact of all of these risk factors on our business or the extent to which any risk factor, or combination of risk factors, may cause actual results to differ materially from those contained in any forward-looking statements.

We qualify all of our forward-looking statements by these cautionary statements. See “Item 3.D. Risk Factors.”

You should read this report and the documents that we have filed as exhibits to this report completely and with the understanding that our actual future results may be materially different from our expectations.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable

Item 2. Offer Statistics and Expected Timetable

Not applicable

Item 3. Key Information

A. Selected Financial Data

Summary of Consolidated Financial and Other Data

The following consolidated financial and other data should be read in conjunction with, and is qualified in its entirety by reference to, the section of this report entitled “Item 5. Operating and Financial Review and Prospects” and our consolidated financial statements and the notes thereto included elsewhere in this report.

The consolidated financial and other data for the years ended December 31, 2019, 2018, and 2017 and as of December 31, 2019 and 2018 have been derived from our audited consolidated financial statements and the notes thereto included elsewhere in this report. We prepared our consolidated financial statements for the years ended December 31, 2019, 2018, and 2017 in accordance with IFRS as issued by the IASB. Please read Note 2 to the consolidated financial statements included elsewhere in this report. Our consolidated financial statements and the notes thereto and other data for the years ended December 31, 2016 and 2015 and as of December 31, 2017, 2016, and 2015 are not included elsewhere in this report.

Our historical results for any prior period are not necessarily indicative of results expected in any future period.

	Year ended December 31,				
	2019	2018	2017	2016	2015
	(in € millions, except share and per share data)				
Consolidated Statement of Operations Data^{(2):}					
Revenue	6,764	5,259	4,090	2,952	1,940
Cost of revenue	5,042	3,906	3,241	2,551	1,714
Gross profit	1,722	1,353	849	401	226
Research and development	615	493	396	207	136
Sales and marketing	826	620	567	368	219
General and administrative	354	283	264	175	106
	1,795	1,396	1,227	750	461
Operating loss	(73)	(43)	(378)	(349)	(235)
Finance income	275	455	118	152	36
Finance costs	(333)	(584)	(974)	(336)	(26)
Share in (losses)/earnings of associate	—	(1)	1	(2)	—
Finance income/(costs) - net	(58)	(130)	(855)	(186)	10
Loss before tax	(131)	(173)	(1,233)	(535)	(225)
Income tax expense/(benefit)	55	(95)	2	4	5
Net loss attributable to owners of the parent	(186)	(78)	(1,235)	(539)	(230)
Net loss per share attributable to owners of the parent ⁽¹⁾					
Basic	(1.03)	(0.44)	(8.14)	(3.63)	(1.62)
Diluted	(1.03)	(0.51)	(8.14)	(3.63)	(1.62)
Weighted-average ordinary shares outstanding ⁽¹⁾					
Basic	180,960,579	177,154,405	151,668,769	148,368,720	141,946,600
Diluted	180,960,579	181,210,292	151,668,769	148,368,720	141,946,600
Consolidated Statement of Cash Flows Data^{(2):}					
Net cash flows from/(used in) operating activities	573	344	179	101	(38)
Net cash flows used in investing activities	(218)	(22)	(435)	(827)	(67)
Net cash flows (used in)/from financing activities	(203)	92	34	916	476
Net increase/(decrease) in cash and cash equivalents	152	414	(222)	190	371
Selected Other Data (unaudited):					
EBITDA ⁽³⁾	14	(11)	(324)	(311)	(205)
Free Cash Flow ⁽³⁾	440	209	109	73	(92)

	As of December 31,				
	2019	2018	2017	2016	2015
	(in € millions)				
Consolidated Statement of Financial Position Data⁽²⁾:					
Cash and cash equivalents	1,065	891	477	755	597
Short term investments	692	915	1,032	830	—
Working capital	(208)	97	38	689	73
Total assets	5,122	4,336	3,107	2,100	1,051
Convertible Notes	—	—	944	1,106	—
Total equity/(deficit) attributable to owners of the parent	2,037	2,094	238	(240)	229

⁽¹⁾ See Note 11 to our consolidated financial statements for an explanation of the calculations of our basic and diluted net loss per share attributable to owners of the parent as well as our basic and diluted weighted-average ordinary shares outstanding.

- ⁽²⁾ The 2018 – 2015 results have not been restated for the impact of IFRS 16, *Leases*, which was adopted on January 1, 2019 using the modified retrospective approach. See Notes 2 and 12 to the consolidated financial statements for further information.
- ⁽³⁾ We define EBITDA as net income/(loss) attributable to owners of the parent before finance income/(costs)—net, income tax (benefit)/expense, and depreciation and amortization. We believe EBITDA is useful to our management and investors as a measure of comparative operating performance from period to period and among companies as it is reflective of changes in pricing decisions, cost controls, and other factors that affect operating performance, and it removes the effect of items not directly resulting from our core operations. We believe that EBITDA also is useful to investors because this metric is frequently used by securities analysts, investors, and other interested parties in their evaluation of the operating performance of companies in the technology industry and other industries similar to ours. EBITDA has limitations as an analytical tool. EBITDA should not be construed as an inference that our future results will be unaffected by unusual or non-recurring items. Additionally, EBITDA is not intended to be a measure of discretionary cash to invest in the growth of our business, as it does not reflect tax payments, debt service requirements, capital expenditures, and certain other cash costs that may recur in the future. Management compensates for these limitations by relying on our results reported under IFRS as issued by IASB in addition to using EBITDA as a supplemental financial measure.

We define “Free Cash Flow” as net cash flows from/(used in) operating activities less capital expenditures and change in restricted cash. We believe Free Cash Flow is a useful supplemental financial measure for us and investors in assessing our ability to pursue business opportunities and investments and to service our debt. Free Cash Flow is not a measure of our liquidity under IFRS and should not be considered as an alternative to net cash flows from/(used in) operating activities.

EBITDA and Free Cash Flow are non-IFRS measures and are not a substitute for IFRS measures in assessing our overall financial performance. Because EBITDA and Free Cash Flow are not measurements determined in accordance with IFRS, and are susceptible to varying calculations, it may not be comparable to other similarly titled measures presented by other companies. You should not consider EBITDA and Free Cash Flow in isolation, or as a substitute for an analysis of our results as reported on our consolidated financial statements appearing elsewhere in this report.

Set forth below is a reconciliation of EBITDA to net loss attributable to owners of the parent and a reconciliation of Free Cash Flow to net cash flows (used in)/from operating activities, in each case, for the periods presented:

EBITDA:

	Year ended December 31,				
	2019	2018	2017	2016	2015
	(in € millions)				
Net loss attributable to owners of the parent	(186)	(78)	(1,235)	(539)	(230)
Finance (income)/costs—net	58	130	855	186	(10)
Income tax expense/(benefit)	55	(95)	2	4	5
Depreciation and amortization	87	32	54	38	30
EBITDA	<u>14</u>	<u>(11)</u>	<u>(324)</u>	<u>(311)</u>	<u>(205)</u>

Free Cash Flow:

	Year ended December 31,				
	2019	2018	2017	2016	2015
	(in € millions)				
Net cash flows from/(used in) operating activities	573	344	179	101	(38)
Capital expenditures	(135)	(125)	(36)	(27)	(44)
Change in restricted cash	2	(10)	(34)	(1)	(10)
Free Cash Flow	<u>440</u>	<u>209</u>	<u>109</u>	<u>73</u>	<u>(92)</u>

B. Capitalization and Indebtedness.

Not applicable

C. Reasons for the Offer and Use of Proceeds.

Not applicable

D. Risk Factors

An investment in our ordinary shares involves a high degree of risk. You should carefully read and consider the following risks, along with the other information included in this Annual Report on Form 20-F. If any of the risks actually occur, our business, results of operations, financial condition, and cash flow could be materially impaired. The risks described below are not the only ones that we may face. Additional risks that are not currently known to us or that we currently consider immaterial may also impair our business, operating results, or financial condition. The trading price of our ordinary shares could decline due to any of these risks, and you could lose all or part of your investment.

Risks Related to Our Business

If our efforts to attract prospective users and to retain existing users are not successful, our growth prospects and revenue will be adversely affected.

Our ability to grow our business and generate revenue depends on retaining, expanding, and effectively monetizing our total user base, including by increasing advertising revenue on our ad-supported service (“Ad-Supported Service”), increasing the number of subscribers to our premium service (“Premium Service”, and together with the Ad-Supported Service, the “Service”), and finding ways to monetize content across the Service. We must convince prospective users of the benefits of our Service and our existing users of the continuing value of our Service. Our ability to attract new users, retain existing users, and convert users of our Ad-Supported Service (“Ad-Supported Users”) to subscribers to our Premium Service (“Premium Subscribers”) depends in large part on our ability to continue to offer leading technologies and products, compelling content, superior functionality, and an engaging user experience. Some of our competitors, including Apple, Amazon, and Google, have developed, and are continuing to develop, devices for which their audio streaming services are preloaded or may also be set as the default providers, which puts us at a significant competitive disadvantage. As consumer tastes and preferences change on the internet and with mobile devices and other internet-connected products, we will need to enhance and improve our existing Service, introduce new services and features, and maintain our competitive position with additional technological advances and an adaptable platform. If we fail to keep pace with technological advances or fail to offer compelling product offerings and state-of-the-art delivery platforms to meet consumer demands, our ability to grow or sustain the reach of our Service, attract and retain users, and increase our Premium Subscribers may be adversely affected.

In addition, in order to increase our advertising revenue, we also seek to increase the listening time that our Ad-Supported Users spend on our Ad-Supported Service and find new opportunities to deliver advertising to users on the Service, such as through podcasts and other opportunities relating to content promotion to users. The more content users stream on the Ad-Supported Service, the more advertising inventory we generally have to sell. Further, growth in our Ad-Supported User base increases the size and scope of user pools targeted by advertisers, which improves our ability to deliver relevant advertising to those users in a manner that maximizes our advertising customers’ return on investment and that ultimately allows us to better demonstrate the effectiveness of our advertising solutions and justifies a pricing structure that is advantageous for us. If we fail to grow our Ad-Supported User base, the amount of content streamed, and the listening time spent by our Ad-Supported Users, we may be unable to grow Ad-Supported revenue. Moreover, given that Premium Subscribers are sourced primarily from the conversion of our Ad-Supported Users to Premium Subscribers, any failure to grow our Ad-Supported User base or convert Ad-Supported Users to Premium Subscribers may negatively impact our revenue.

In order to increase our Ad-Supported Users and our Premium Subscribers, we will need to address a number of challenges, including:

- improving our Ad-Supported Service;
- providing users with a consistently high-quality and user-friendly experience;
- continuing to curate a catalog of content that consumers want to engage with on our Service;
- continuing to innovate and keep pace with changes in technology and our competitors; and
- maintaining and building our relationships with the makers of consumer products such as mobile devices.

Failure to overcome any one of these challenges could have a material adverse effect on our business, operating results, and financial condition.

Moreover, the provisions of certain of our license agreements may require consent to implement improvements to, or otherwise change, our Service. We may not be able to obtain consent from our rights holders to add additional features and functionality to our Service or our rights holders may be delayed in providing such consent, which may hinder our ability to be responsive to our users' tastes and preferences and may make us less competitive with other services.

We face and will continue to face competition for Ad-Supported Users, Premium Subscribers, and user listening time.

We compete for the time and attention of our users with other content providers on the basis of a number of factors, including quality of experience, relevance, diversity of content, ease of use, price, accessibility, perception of advertising load, brand awareness, and reputation.

We compete with providers of on-demand music, which is purchased or available for free and playable on mobile or other connected devices. These forms of media may be purchased, downloaded, and owned, such as iTunes audio files, MP3s, or CDs, or accessed from subscription or free online on-demand offerings by music providers or content streams from other online services. We face increasing competition for users from a growing variety of businesses, including other free-to-the-user and/or subscription music services around the world, many of which offer services that seek to emulate our Service and/or have differentiated service offerings. Many of our current or future competitors are already entrenched or may have significant brand recognition, existing user bases, and/or ability to bundle with other goods and/or services, both globally and in particular regions and/or markets which we seek to penetrate.

We also compete with providers of podcasts that offer an on-demand catalog of podcast content that is similar to ours. We face increasing competition from a growing variety of podcast providers that seek to differentiate their service by content offering and product features, and they may be more successful than us in predicting user preferences, providing popular content, and innovating new features.

Our competitors also include providers of internet radio, terrestrial radio, and satellite radio. Internet radio providers may offer more extensive content libraries than we offer and some may be offered internationally more broadly than our Service. In addition, internet radio providers may leverage their existing infrastructure and content libraries, as well as their brand recognition and user base, to augment their services by offering competing on-demand music features to provide users with more comprehensive music service delivery choices. Terrestrial radio providers often offer their content for free, are well-established and accessible to consumers, and offer media content that we currently do not offer. In addition, many terrestrial radio stations have begun broadcasting digital signals, which provide high-quality audio transmission. Satellite radio providers, such as Sirius XM and iHeartRadio, may offer extensive and exclusive news, comedy, sports and talk content, and national signal coverage.

We believe that companies with a combination of technical expertise, brand recognition, financial resources, and digital media experience also pose a significant threat of developing competing on-demand audio distribution technologies. In particular, if known incumbents in the digital media space such as Facebook choose to offer competing services, they may devote greater resources than we have available, have a more accelerated time frame for deployment, and leverage their existing user base and proprietary technologies to provide services that our users and advertisers may view as superior. Furthermore, Amazon Music, Apple Music, Apple Podcasts, Deezer, Google Play Music, Joox, Pandora, SoundCloud, Tik-Tok, YouTube Music, and others have competing services, which may negatively impact our business, operating results, and financial condition. Our current and future competitors may have higher brand recognition, more established relationships with content licensors and mobile device manufacturers, greater financial, technical, and other resources, more sophisticated technologies, and/or more experience in the markets in which we compete. Our current and future competitors may also engage in mergers or acquisitions with each other, as Sirius XM and Pandora have done, to combine and leverage their audiences. Our current and future competitors may innovate new features or introduce new ways of consuming or engaging with content that cause our users, especially the younger demographic, to switch to another product, which would negatively affect our user retention, growth, and engagement. In addition, Apple and Google also own application store platforms and are charging in-application purchase fees, which are not being levied on their own applications, thus creating a competitive advantage for themselves against us. If other competitors that own application store platforms and competitive services adopt similar practices, we may be similarly impacted. As the market for on-demand audio on the internet and mobile and connected devices increases, new competitors, business models, and solutions are likely to emerge.

We also compete for users based on our presence and visibility as compared with other businesses and platforms that deliver audio content through the internet and connected devices. We face significant competition for users from companies promoting their own digital audio content online or through application stores, including several large, well-funded, and seasoned participants in the digital media market. Device application stores often offer users the ability to browse applications by various criteria, such as the

number of downloads in a given time period, the length of time since an application was released or updated, or the category in which the application is placed. The websites and applications of our competitors may rank higher than our website and our Spotify application, and our application may be difficult to locate in device application stores, which could draw potential users away from our Service and toward those of our competitors. In addition, some of our competitors, including Apple, Amazon, and Google, have developed, and are continuing to develop, devices for which their music and/or podcast streaming service is preloaded and/or able to be used out-of-the-box without the need to log in, creating a visibility and access advantage. If we are unable to compete successfully for users against other digital media providers by maintaining and increasing our presence, ease of use, and visibility online, on devices, and in application stores, our number of Premium Subscribers, Ad-Supported Users, and the amount of content streamed on our Service may fail to increase or may decline and our subscription fees and advertising sales may suffer. See “—If our efforts to attract prospective users and to retain existing users are not successful, our growth prospects and revenue will be adversely affected.”

We compete for a share of advertisers’ overall marketing budgets with other content providers on a variety of factors, including perceived return on investment, effectiveness and relevance of our advertising products, pricing structure, and ability to deliver large volumes or precise types of advertisements to targeted user demographic pools. We also compete for advertisers with a range of internet companies, including major internet portals, search engine companies, social media sites, and mobile applications, as well as traditional advertising channels such as terrestrial radio and television.

Large internet companies with strong brand recognition, such as Facebook, Google, Amazon, and Twitter, have significant numbers of sales personnel, substantial advertising inventory, proprietary advertising technology solutions, and traffic across web, mobile, and connected devices that provide a significant competitive advantage and have a significant impact on pricing for reaching these user bases. Failure to compete successfully against our current or future competitors could result in the loss of current or potential advertisers, a reduced share of our advertisers’ overall marketing budget, the loss of existing or potential users, or diminished brand strength, which could adversely affect our pricing and margins, lower our revenue, increase our research and development and marketing expenses, and prevent us from achieving or maintaining profitability.

We depend upon third-party licenses for most of the content we stream and an adverse change to, loss of, or claim that we do not hold any necessary licenses may materially adversely affect our business, operating results, and financial condition.

To secure the rights to stream content, we enter into license agreements to obtain licenses from rights holders such as record labels, aggregators, artists, music publishers, performing rights organizations, collecting societies, podcasters and podcast networks, and other copyright owners or their agents, and pay royalties or other consideration to such parties or their agents around the world. We cannot guarantee that our efforts to obtain all necessary licenses to stream content will be successful, nor that the licenses available to us now will continue to be available in the future at rates and on terms that are favorable or commercially reasonable or at all. The terms of these licenses, including the royalty rates that we are required to pay pursuant to them, may change as a result of changes in our bargaining power, the industry, laws and regulations, or for other reasons. Increases in royalty rates or changes to other terms of these licenses may materially impact our business, operating results, and financial condition.

We enter into license agreements to obtain rights to stream sound recordings, including from the major record labels who hold the rights to stream a significant number of sound recordings—Universal Music Group, Sony Music Entertainment, and Warner Music Group—as well as Music and Entertainment Rights Licensing Independent Network (“Merlin”), which represents the digital rights on behalf of numerous independent record labels. If we fail to obtain these licenses, the size and quality of our catalog may be materially impacted and our business, operating results, and financial condition could be materially harmed.

We generally obtain licenses for two types of rights with respect to musical compositions: mechanical rights and public performance rights.

With respect to mechanical rights, in the United States, the rates we pay are, to a significant degree, a function of a ratemaking proceeding conducted by an administrative agency called the Copyright Royalty Board. The rates that the Copyright Royalty Board set apply both to compositions that we license under the compulsory license in Section 115 of the Copyright Act of 1976 (the “Copyright Act”), and to a number of direct licenses that we have with music publishers for U.S. rights, in which the applicable rate is generally pegged to the statutory rate set by the Copyright Royalty Board. The most recent proceeding before the Copyright Royalty Board, known as the “Phonorecords III Proceedings,” set the rates for the Section 115 compulsory license for calendar years 2018 to 2022. The Copyright Royalty Board issued its final written determination in November 2018. Based on management’s estimates and forecasts for the next two fiscal years, we currently believe that the rates determined by the Copyright Royalty Board will increase our royalty costs in 2020. The rates set by the Copyright Royalty Board may still be modified if the determination is overturned in the appeals process. In March 2019, we, Google, Amazon, and Pandora each filed an appeal of the Copyright Royalty Board’s determination. We cannot assure you that the outcome of the appeal will be successful in our favor or that any changes to the rates or terms determined by the Copyright Royalty Board or the application of such rates or terms will not adversely affect our business, operating results, and financial condition, prospectively or retrospectively. The rates set by the Copyright Royalty Board are also

subject to further change as part of future Copyright Royalty Board proceedings. If any such rate change increases our content acquisition costs and impacts our ability to obtain content on pricing terms favorable to us, it could negatively harm our business, operating results, and financial condition and hinder our ability to provide interactive features in our services, or cause one or more of our services not to be economically viable.

In the United States, public performance rights are generally obtained through intermediaries known as performing rights organizations (“PROs”), which negotiate blanket licenses with copyright users for the public performance of compositions in their repertory, collect royalties under such licenses, and distribute those royalties to copyright owners. The royalty rates available to us today may not be available to us in the future. Licenses provided by two of these PROs, the American Society of Composers, Authors and Publishers (“ASCAP”) and Broadcast Music, Inc. (“BMI”), cover the majority of the music we stream and are governed by consent decrees relating to decades-old litigations. In 2019, the U.S. Department of Justice indicated that it was formally reviewing the relevance and need of these consent decrees. Changes to the terms of or interpretation of these consent decrees, up to and including the dissolution of the consent decrees, could affect our ability to obtain licenses from these PROs on reasonable terms, which could harm our business, operating results, and financial condition. In addition, an increase in the number of compositions that must be licensed from PROs that are not subject to the consent decrees, or from copyright owners that have withdrawn public performance rights from the PROs, could likewise impede our ability to license public performance rights on favorable terms.

In other parts of the world, including Europe, Asia Pacific, and Latin America, we obtain mechanical and performance licenses for musical compositions either through local collecting societies representing publishers or from publishers directly, or a combination thereof. We cannot guarantee that our licenses with collecting societies and our direct licenses with publishers provide full coverage for all of the musical compositions we make available to our users in such countries. In Asia Pacific and Latin America, we are seeing a trend of movement away from blanket licenses from copyright collectives, which is leading to a fragmented copyright licensing landscape. Publishers, songwriters, and other rights holders choosing not to be represented by collecting societies could adversely impact our ability to secure favorable licensing arrangements in connection with musical compositions that such rights holders own or control, including by increasing the costs of licensing such musical compositions, or subjecting us to significant liability or injunctions for copyright infringement. In addition, in markets that lack collecting society infrastructure, such as in the Middle East and parts of Africa and Asia Pacific, it is extremely difficult to identify who owns the publishing rights in the content we stream. This practical obstacle creates additional risk exposure as there inevitably will be licensing gaps in the content we stream, and these risks may increase as we look to expand into new developing markets with uncertain publishing licensing landscapes.

With respect to podcasts and other non-music content, we produce or commission the content ourselves or obtain distribution rights directly from rights holders. In the former scenario, we employ various business models to create original content. In the latter scenario, we either negotiate licenses directly with individuals or entities or obtain rights through our owned and operated platforms, such as Anchor, Soundtrap for Storytellers, and Spotify for Podcasters, that enable creators to post content directly to our Service after agreeing to comply with the applicable terms and conditions. In all of the above scenarios, we are dependent on those who provide content on our Service complying with the terms and conditions of our license agreements as well as the Spotify Terms and Conditions of Use (the “Terms and Conditions of Use”). However, we cannot guarantee that rights holders or content providers will comply with their obligations, and such failure to do so may materially impact our business, operating results, and financial condition.

There is also no guarantee that we have all of the licenses we need to stream content, as the process of obtaining such licenses involves many rights holders, some of whom are unknown, and myriad complex legal issues across many jurisdictions, including open questions of law as to when and whether particular licenses are needed. Additionally, there is a risk that rights holders, creators, performers, writers and their agents, or societies, unions, guilds, or legislative or regulatory bodies will create or attempt to create new rights or regulations that could require us to enter into license agreements with, and pay royalties to, newly defined groups of rights holders, some of which may be difficult or impossible to identify. See also “—Difficulties in obtaining accurate and comprehensive information necessary to identify the compositions embodied in sound recordings on our Service and the ownership thereof may impact our ability to perform our obligations under our licenses, affect the size of our catalog, impact our ability to control content acquisition costs, and lead to potential copyright infringement claims.”

Even when we are able to enter into license agreements with rights holders, we cannot guarantee that such agreements will continue to be renewed indefinitely. For example, from time to time, our license agreements with certain rights holders and/or their agents expire while we negotiate their renewals and, per industry custom and practice, we may enter into brief (for example, month-, week-, or even days-long) extensions of those agreements or provisional licenses and/or continue to operate on an at will basis as if the license agreement had been extended, including by our continuing to make content available. During these periods, we may not have assurance of long-term access to such rights holders’ content, which could have a material adverse effect on our business and could lead to potential copyright infringement claims.

It is also possible that such agreements will never be renewed at all. The lack of renewal, or termination, of one or more of our license agreements, or the renewal of a license agreement on less favorable terms, could have a material adverse effect on our business, operating results, and financial condition.

We have no control over third-party providers of our content. The concentration of control of content by our major providers means that even one entity, or a small number of entities working together, may unilaterally affect our access to music and other content.

We rely on various rights holders, over whom we have no control, for the content we make available on our Service. We cannot guarantee that these parties will always choose to license to us or license to us on terms that are acceptable to us.

The music industry has a high level of concentration, which means that one or a small number of entities may, on their own, take actions that adversely affect our business. For example, with respect to sound recordings, the music licensed to us under our agreements with Universal Music Group, Sony Music Entertainment, Warner Music Group, and Merlin, makes up the majority of music consumed on our Service. For the year ended December 31, 2019, this content accounted for approximately 82% of music streams. Our business may be adversely affected if our access to music is limited or delayed because of deterioration in our relationships with one or more of these rights holders or if they choose not to license to us for any other reason. Rights holders also may attempt to take advantage of their market power (including by leveraging their publishing affiliate) to seek onerous financial or other terms from us or otherwise impose restrictions that hinder our ability to further innovate our service offerings. We have particular issues in markets where local content is important and such local content is held by local major labels or even individual artists, making it difficult to obtain such local content at all or on economically favorable terms. In addition, publishers' fractional ownership of shares of musical works enhances their market power. As a result, the loss of rights to a major publisher catalogue would force us to take down a significant portion of popular repertoire in the applicable territory or territories, which would significantly disadvantage us in such territory or territories. The lack of complete metadata with respect to publisher ownership may also present challenges in taking down all the tracks of a given publisher. Even if we are able to secure rights to sound recordings from record labels and other copyright owners, artists and/or artist groups may object and may exert public or private pressure on those record labels or copyright owners or other third parties to discontinue licensing rights to us, hold back content from us, or increase royalty rates. As a result, our ability to continue to license rights to sound recordings is subject to convincing a broad range of stakeholders of the value and quality of our Service. To the extent that we are unable to license a large amount of content or the content of certain popular artists, our business, operating results, and financial condition could be materially harmed.

We are a party to many license agreements that are complex and impose numerous obligations upon us that may make it difficult to operate our business, and a breach of such agreements could adversely affect our business, operating results, and financial condition.

Many of our license agreements are complex and impose numerous obligations on us, including obligations to, among other things:

- meet certain user and conversion targets in order to secure certain licenses and royalty rates;
- calculate and make payments based on complex royalty structures, which requires tracking usage of content on our Service that may have inaccurate or incomplete metadata necessary for such calculation;
- provide periodic reports on the exploitation of the content;
- represent that we will obtain all necessary publishing licenses and consents and pay all associated fees, royalties, and other amounts due for the licensing of musical compositions;
- provide advertising inventory at discounted rates or on other favorable terms;
- comply with certain service offering restrictions;
- comply with certain marketing and advertising restrictions; and
- comply with certain security and technical specifications.

Many of our license agreements grant the licensor the right to audit our compliance with the terms and conditions of such agreements. Some of our license agreements also include steering, non-discrimination and so-called "most favored nations" provisions, which require that certain material terms of such agreements are no less favorable than those provided in our agreements with any other similarly situated licensor. If triggered, these provisions could cause our payments or other obligations under those agreements to escalate substantially. Additionally, some of our license agreements require consent to undertake certain business initiatives and, without such consent, our ability to undertake or continue operating new business initiatives may be limited. This could hurt our competitive position.

If we materially breach any of these obligations or any other obligations set forth in any of our license agreements, or if we use content in ways that are found to exceed the scope of such agreements, we could be subject to monetary penalties, and/or rights holders could impede our business by withholding content, discounts and bundle approvals and the rights to launch new service offerings, and could ultimately terminate our rights under such license agreements, any of which could have a material adverse effect on our business, operating results, and financial condition. We have entered into settlement agreements requiring us to make substantial payments in the past, and may do so in the future, as a result of claims that we are in breach of certain provisions in, or have exceeded the scope of, our license agreements.

Our royalty payment scheme is complex, and it is difficult to estimate the amount payable under our license agreements.

Under our license agreements and relevant statutes, we must pay all required royalties to record labels, music publishers, and other copyright owners in order to stream content. The determination of the amount and timing of such payments is complex and subject to a number of variables, including the type of content streamed, the country in which it is streamed, the service tier such content is streamed on, the amount of revenue generated by the streaming of the content, the identity of the license holder to whom royalties are owed, the current size of our user base, our current ratio of Ad-Supported Users to Premium Subscribers, the applicability of any most favored nations provisions, and any applicable advertising fees and discounts, among other variables. Additionally, we have certain arrangements whereby royalty costs are paid in advance or are subject to minimum guaranteed amounts. An accrual is estimated when actual royalty costs to be incurred during a contractual period are expected to fall short of the minimum guaranteed amount. Moreover, for minimum guarantee arrangements for which we cannot reliably predict the underlying expense, we will expense the minimum guarantee on a straight-line basis over the term of the arrangement. Additionally, we also have license agreements that include so-called “most favored nations” provisions that require that the material terms of such agreements are the most favorable material terms provided to any music licensor, which, if triggered, could cause our royalty payments under those agreements to escalate substantially. An accrual and expense is recognized when it is probable that we will make additional royalty payments under these terms.

We cannot assure you that the internal controls and systems we use to determine royalties payable will always be effective. We have in the past identified a material weakness in our internal controls relating to rights holder liabilities and may identify additional material weaknesses in the future. See “—If we fail to implement and maintain effective internal control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.” If we fail to implement and maintain effective controls relating to rights holder liabilities, we may underpay/under-accrue or overpay/over-accrue the royalty amounts payable to record labels, music publishers, and other copyright owners. Underpayment could result in (i) litigation or other disputes with record labels, music publishers, and other copyright owners, (ii) the unexpected payment of additional royalties in material amounts, and (iii) damage to our business relationships with record labels, music publishers, other copyright owners, and artists and/or artist groups. If we overpay royalties, we may be unable to reclaim such overpayments, and our profits will suffer. Failure to accurately pay our royalties may adversely affect our business, operating results, and financial condition.

Minimum guarantees required under certain of our license agreements may limit our operating flexibility and may adversely affect our business, operating results, and financial condition.

Certain of our license agreements contain minimum guarantees and/or require that we make minimum guarantee payments. As of December 31, 2019, we have estimated future minimum guarantee commitments of €1.0 billion, primarily under license agreements for sound recordings and musical compositions (both for mechanical rights and public performance rights) but also under license agreements for podcasts. Such minimum guarantees related to our content acquisition costs are not always tied to our revenue and/or user growth forecasts (e.g., number of users, active users, Premium Subscribers), or the number of sound recordings and musical compositions or podcasts used on our Service. We may also be subject to minimum guarantees to rights holders with respect to certain strategic partnerships we enter into that may not produce all of the expected benefits. Accordingly, our ability to achieve and sustain profitability and operating leverage on our Service in part depends on our ability to increase our revenue through increased sales of Premium Service and advertising sales on terms that maintain an adequate gross margin. The duration of our license agreements for sound recordings and musical compositions that contain minimum guarantees is frequently between one and two years, but our Premium Subscribers may cancel their subscriptions at any time. If our forecasts of Premium Subscriber acquisition or retention do not meet our expectations or the number of our Premium Subscribers or advertising sales decline significantly during the term of our license agreements, our margins may be materially and adversely affected. To the extent our Premium Service revenue growth or advertising sales do not meet our expectations, our business, operating results, and financial condition could also be adversely affected as a result of such minimum guarantees. In addition, the fixed cost nature of these minimum guarantees may limit our flexibility in planning for, or reacting to, changes in our business and the market segments in which we operate.

We rely on estimates of the market share of streaming content owned by each content provider, as well as our own user growth and forecasted advertising revenue, to forecast whether such minimum guarantees could be recouped against our actual content acquisition costs incurred over the duration of the license agreement. To the extent that these revenue and/or market share estimates

underperform relative to our expectations, leading to content acquisition costs that do not exceed such minimum guarantees, our margins may be materially and adversely affected.

Difficulties in obtaining accurate and comprehensive information necessary to identify the compositions embodied in sound recordings on our Service and the ownership thereof may impact our ability to perform our obligations under our licenses, affect the size of our catalog, impact our ability to control content acquisition costs, and lead to potential copyright infringement claims.

Comprehensive and accurate ownership information for the musical compositions embodied in sound recordings is often unavailable to us or difficult or, in some cases, impossible for us to obtain, sometimes because it is withheld by the owners or administrators of such rights. We currently rely on the assistance of third parties to determine this information. If the information provided to us or obtained by such third parties does not comprehensively or accurately identify the ownership of musical compositions, or if we are unable to determine which musical compositions correspond to specific sound recordings, it may be difficult or impossible to identify the appropriate rights holders from whom to obtain licenses or to whom to pay royalties. This may make it difficult to comply with the obligations of any agreements with those rights holders. This may also make it difficult to identify content for removal from the Service if we lose the rights to such musical compositions.

In the United States, we also rely on the assistance of third parties to issue notices of intent (“NOIs”) to obtain a compulsory license under Section 115 of the Copyright Act to those copyright owners with whom we do not have a direct license agreement. The enactment of the Music Modernization Act (“MMA”) in October 2018 amended the process to obtain a compulsory license under Section 115 of the Copyright Act. In particular, from October 2018 through December 31, 2020, to the extent we do not have a direct license and cannot locate the owner of a composition, the law no longer provides a mechanism for us to obtain a compulsory license, but instead provides a limitation of liability under which our only liability for the reproduction and/or distribution of such compositions is the royalty rate set by the U.S. Copyright Royalty Board. That limitation of liability is contingent upon following various procedural steps outlined in the MMA and there is a risk that we can be found to not have properly followed those steps (which could expose us to the risk of increased financial liability in litigations). Beginning on January 1, 2021, the MMA will provide a blanket license to reproduce and/or distribute musical compositions on our service. See “—We depend upon third-party licenses for most of the content we stream and an adverse change to, loss of, or claim that we do not hold any necessary licenses may materially adversely affect our business, operating results, and financial condition.”

The lack of comprehensive and accurate ownership information or the inability to determine which musical compositions correspond to specific sound recordings can cause difficulties in issuing NOIs to the correct parties (including the United States Copyright Office prior to the enactment of the MMA) or serving NOIs in a timely manner and can otherwise cause difficulties in obtaining licenses. This could lead to a reduction of sound recordings available to be streamed on our Service, adversely impacting our ability to retain and expand our user base, and could make it difficult to ensure that we are fully licensed.

These challenges, and others concerning the licensing of musical compositions embodied in sound recordings on our Service, may subject us to significant liability for copyright infringement, breach of contract, or other claims. See “Item 8.A. Consolidated Statements and Other Financial Information—Legal or Arbitration Proceedings.”

New copyright legislation enacted in the United States may increase the costs and/or difficulty of music licensing.

The recently enacted MMA makes a number of significant changes to the legal regime governing music licensing in the United States. This legislation could, when fully implemented, increase the cost and/or difficulty of obtaining necessary music licenses. The legislation must initially be implemented by the responsible government agencies: the United States Copyright Office and the Copyright Royalty Board. If there is a delay in the adoption of new regulations, or if the rules adopted are burdensome, it may make it more challenging for us to obtain the necessary licenses and/or increase our costs. In July 2019, the Copyright Office selected an entity to serve as the “mechanical licensing collective” (“MLC”) to collect mechanical licensing payments from digital music services and distribute them to the correct copyright owners. If the MLC cannot carry out its duties, we may be unable to obtain the necessary licenses.

Additionally, the legislation makes various changes in the rules and procedures of the “rate courts” that set royalty rates paid to ASCAP and BMI for performance licenses covering musical compositions. It changes the mechanism by which judges are assigned to hear rate-setting disputes. For some proceedings, it also eliminates a provision barring the introduction of sound recording royalty rates in rate court proceedings. The legislation also makes changes to how royalty rates are set by the Copyright Royalty Board for statutory mechanical licenses. The precise effect of these changes is uncertain, but it could lead the rate courts or the Copyright Royalty Board to adopt less favorable terms for performance licenses or statutory mechanical licenses in the future, which could negatively harm our business, operating results, and financial condition.

The legislation also gives copyright owners a new federal digital performance right for sound recordings made prior to February 15, 1972, which were previously governed exclusively by state laws. We must ensure that our license agreements for the right to stream sound recordings encompass this new federal right. If we fail to do so, the size and quality of our catalog may be materially impacted and our business, operating results, and financial condition could be materially harmed.

We face many risks associated with our international expansion, including difficulties obtaining rights to stream content on favorable terms.

We are continuing to expand our operations into additional international markets. However, offering our Service in a new geographical area involves numerous risks and challenges. For example, the licensing terms offered by rights organizations and individual copyright owners in countries around the world are currently expensive. Addressing licensing structure and royalty rate issues in any new geographic market requires us to make very substantial investments of time, capital, and other resources, and our business could fail if such investments do not succeed. There can be no assurance that we will succeed or achieve any return on these investments.

In addition to the above, continued expansion around the world exposes us to other risks such as:

- lack of well-functioning copyright collective management organizations that are able to grant us music licenses, process reports, and distribute royalties in markets;
- fragmentation of rights ownership in various markets causing lack of transparency of rights coverage and overpayment or underpayment to record labels, music publishers, artists, performing rights organizations, and other copyright owners;
- difficulties in obtaining license rights to local content;
- increased risk of disputes with and/or lawsuits filed by rights holders in connection with our expansion into new markets (see “Item 8.A. Consolidated Statements and Other Financial Information—Legal or Arbitration Proceedings”);
- difficulties in achieving market acceptance of our Service in different geographic markets with different tastes and interests;
- difficulties in achieving viral marketing growth in certain other countries where we commit fewer sales and marketing resources;
- difficulties in managing operations due to language barriers, distance, staffing, user behavior and spending capability, cultural differences, business infrastructure constraints, and laws regulating corporations that operate internationally;
- application of different laws and regulations of other jurisdictions, including privacy, censorship, and liability standards and regulations, as well as intellectual property laws;
- potential adverse tax consequences associated with foreign operations and revenue;
- complex foreign exchange fluctuation and associated issues;
- increased competition from local websites and audio content providers, some with financial power and resources to undercut the market or enter into exclusive deals with local content providers to decrease competition;
- credit risk and higher levels of payment fraud;
- political and economic instability in some countries;
- restrictions on international monetary flows; and
- reduced or ineffective protection of our intellectual property rights in some countries.

As a result of these obstacles, we may find it impossible or prohibitively expensive to enter additional markets, or entry into foreign markets could be delayed, which could hinder our ability to grow our business.

If we fail to effectively manage our growth, our business, operating results, and financial condition may suffer.

Our rapid growth has placed, and will continue to place, significant demands on our management and our operational and financial infrastructure. In order to attain and maintain profitability, we will need to recruit, integrate, and retain skilled and experienced personnel who can demonstrate our value proposition to users, advertisers, and business partners and who can increase the monetization of the music and podcasts streamed on our Service, particularly on mobile devices. Continued growth could also strain our ability to maintain reliable service levels for our users, effectively monetize the music and podcasts streamed, develop and improve our operational and financial controls, and recruit, train, and retain highly skilled personnel. If our systems do not evolve to

meet the increased demands placed on us by an increasing number of advertisers, we also may be unable to meet our obligations under advertising agreements with respect to the delivery of advertising or other performance obligations. As our operations grow in size, scope, and complexity, we will need to improve and upgrade our systems and infrastructure, which will require significant expenditures and allocation of valuable technical and management resources. If we fail to maintain efficiency and allocate limited resources effectively in our organization as it grows, our business, operating results, and financial condition may suffer.

We have experienced rapid growth rates in both the number of active users of our Service and revenue over the last few years. As we grow larger and increase our user base and usage, we expect it will become increasingly difficult to maintain the rate of growth we currently experience.

Our business emphasizes rapid innovation and prioritizes long-term user engagement over short-term financial condition or results of operations. That strategy may yield results that sometimes do not align with the market's expectations. If that happens, our stock price may be negatively affected.

Our business is growing and becoming more complex, and our success depends on our ability to quickly develop and launch new and innovative products. We believe our culture fosters this goal. Our focus on complexity and quick reactions could result in unintended outcomes or decisions that are poorly received by our users, advertisers, or partners. We have made, and expect to continue to make, significant investments to develop and launch new products, services, and initiatives, which may involve significant risks and uncertainties, including the fact that such offerings may not be commercially viable for an indefinite period of time or at all, or may not result in adequate return of capital on our investments. No assurance can be given that such new offerings will be successful and will not adversely affect our reputation, operating results, and financial condition. Our culture also prioritizes our long-term user engagement over short-term financial condition or results of operations. We frequently make decisions that may reduce our short-term revenue or profitability if we believe that the decisions benefit the aggregate user experience and will thereby improve our financial performance over the long-term. These decisions may not produce the long-term benefits that we expect, in which case our user growth and engagement, our relationships with advertisers and partners, as well as our business, operating results, and financial condition could be seriously harmed.

If we fail to accurately predict, recommend, and play content that our users enjoy, we may fail to retain existing users and attract new users in sufficient numbers to meet investor expectations for growth or to operate our business profitably.

We believe that a key differentiating factor between Spotify and other audio content providers is our ability to predict music or podcasts that our users will enjoy. Our system for predicting user preferences and selecting content tailored to our users' individual tastes is based on advanced data analytics systems and our proprietary algorithms. We have invested, and will continue to invest, significant resources in refining these technologies; however, we cannot assure you that such investments will yield an attractive return or that such refinements will be effective. The effectiveness of our ability to predict user preferences and select content tailored to our users' individual tastes depends in part on our ability to gather and effectively analyze large amounts of user data. In addition, our ability to offer users content that they have not previously heard and impart a sense of discovery depends on our ability to acquire and appropriately categorize additional content that will appeal to our users' diverse and changing tastes. While we have a large catalog of music and podcasts available to stream, we must continuously identify and analyze additional content that our users will enjoy and we may not effectively do so. Our ability to predict and select content that our users enjoy is critical to the perceived value of our Service among users and failure to make accurate predictions could materially adversely affect our ability to adequately attract and retain users, increase content hours consumed, and sell advertising to meet investor expectations for growth or to operate the business profitably.

If we are unable to increase revenue from our Service on mobile and other connected devices, our results of operations may be materially adversely affected.

Our business model with respect to monetization of our Service on mobile and other connected devices is still evolving. As users migrate away from personal computers, there is increasing pressure to monetize mobile and other connected devices, including cars and in-home devices. In all markets, we offer our Ad-Supported Service on mobile, from which we generate advertising revenue. However, to date, we primarily rely on our Premium Service to generate revenue on mobile and other connected devices. If we are unable to effectively monetize our Service on mobile and other connected devices, our business, operating results, and financial condition may suffer.

We have incurred significant operating losses in the past, and we may not be able to generate sufficient revenue to be profitable, or to generate positive cash flow on a sustained basis. In addition, our revenue growth rate may decline.

Since our inception in April 2006, we have incurred significant operating losses and, as of December 31, 2019, had an accumulated deficit of €2,709 million. For the years ended December 31, 2019, 2018, and 2017, our operating losses were €73

million, €43 million, and €378 million, respectively. We have incurred significant costs to license content and continue to pay royalties to record labels, publishers, and other copyright owners for such content. We cannot guarantee that we will generate sufficient revenue from our efforts to monetize the Service via the sale of our Premium Service and generating advertising revenue, including on our Ad-Supported Service, to offset the cost of our content and these royalty expenses. If we cannot successfully earn revenue at a rate that exceeds the operational costs, including royalty expenses, associated with our Service, we will not be able to achieve or sustain profitability or generate positive cash flow on a sustained basis.

Furthermore, we cannot assure you that the growth in revenue we have experienced over the past few years will continue at the same rate or even continue to grow at all. We expect that, in the future, our revenue growth rate may decline because of a variety of factors, including increased competition and the maturation of our business. You should not consider our historical revenue growth or operating expenses as indicative of our future performance. If our revenue growth rate declines or our operating expenses exceed our expectations, our financial performance may be adversely affected.

Additionally, we also expect our costs to increase in future periods, which could negatively affect our future operating results and ability to achieve profitability. We expect to continue to expend substantial financial and other resources on:

- securing top quality audio and video content from leading record labels, distributors, and aggregators, as well as the publishing right to any underlying musical compositions;
- creating new forms of original content;
- our technology infrastructure, including website architecture, development tools, scalability, availability, performance, security, and disaster recovery measures;
- research and development, including investments in our research and development team and the development of new features;
- sales and marketing, including a significant expansion of our field sales organization;
- international expansion in an effort to increase our member base, engagement, and sales;
- capital expenditures, including costs related to our facilities, that we will incur to grow our operations and remain competitive; and
- general administration, including legal and accounting expenses.

These investments may not result in increased revenue or growth in our business. If we fail to continue to grow our revenue and overall business, our business, operating results, and financial condition would be harmed.

Expansion of our operations to deliver content beyond music, including podcasts, subjects us to increased business, legal, financial, reputational, and competitive risks.

Expansion of our operations to deliver content beyond music involves numerous risks and challenges, including increased capital requirements, new competitors, and the need to develop new strategic relationships. Growth in these areas may require additional changes to our existing business model and cost structure, modifications to our infrastructure, and exposure to new regulatory, legal and reputational risks, including infringement liability, any of which may require additional expertise that we currently do not have. See “—We may be subject to disputes or liabilities associated with content made available on our Service.” There is no guarantee that we will be able to generate sufficient revenue from podcasts or other non-music content to offset the costs of creating or acquiring this content. Further, we have initially established a reputation as a music streaming service and our ability to gain acceptance and listenership for podcasts or other non-music content, and thus our ability to attract users and advertisers to this content, is not certain. Failure to successfully monetize and generate revenues from such content, including failure to obtain or retain rights to podcasts or other non-music content on acceptable terms, or at all, or to effectively manage the numerous risks and challenges associated with such expansion could adversely affect our business, operating results, and financial condition.

In addition, we enter into multi-year commitments for original content that we produce or commission. Given the multiple-year duration and largely fixed cost nature of such commitments, if our user growth and retention do not meet our expectations, our margins may be adversely impacted. Payment terms for certain content that we produce or commission will typically require more upfront cash payments than other content licenses or arrangements whereby we do not pay for the production of such content. To the extent our user and/or revenue growth do not meet our expectations, our liquidity and results of operations could be adversely affected as a result of such content commitments. The long-term and fixed cost nature of certain content commitments may also limit our flexibility in planning for or reacting to changes in our business, as well as our ability to adjust our content offering if our users do not react favorably to the content we produce. Any such event could adversely impact our business, operating results, and financial condition.

Streaming depends on effectively working with operating systems, online platforms, hardware, networks, regulations, and standards we do not control. Changes in our Service or those operating systems, hardware, networks, regulations, or standards, and our limitations on our ability to access those platforms, operating systems, hardware, or networks may seriously harm our business.

We rely on a variety of operating systems, online platforms, hardware, and networks to reach our users. These platforms range from desktop and mobile operating systems and application stores to wearables and intelligent voice assistants. The owners or operators of these platforms may not share our interests and may restrict our access to them or place conditions on access that would materially affect our ability to access those platforms. In particular, where the owner of a platform is also our direct competitor, the platform may attempt to use this position to affect our access to users and ability to compete. For example, an online platform might arbitrarily remove our Service from its platform, deprive us of access to business critical data, or engage in other harmful practices. Online platforms also may unilaterally impose certain requirements that negatively affect our ability to convert users to the Premium Service, such as conditions that limit our freedom to communicate promotions and offers to our users. Similarly, online platforms may force us to use the platform's payment processing systems that may be inferior to, and more costly than other payment processing services available in the market. Online platforms frequently change the rules and requirements for services like ours to access the platform, and such changes may adversely affect the success or desirability of our Service. To maintain certain elements of the Service on a platform, we may need to make additional concessions to the platform operator that may adversely affect other aspects of the business or require us to invest significant expenses. Online platforms may limit our access to information about users, limiting our ability to convert and retain them. Online platforms also may deny access to application programming interfaces or documentation, limiting functionality of our Service on the platform.

In March 2019, we filed a complaint against Apple with the European Commission for engaging in certain behaviors that we believe are unlawful and anti-competitive. We cannot assure you that the outcome of the process with the European Commission will be successfully resolved in our favor.

Furthermore, because devices providing access to our Service are not manufactured and sold by us, we cannot guarantee that these devices perform reliably, and any faulty connection between these devices and our Service may result in consumer dissatisfaction toward us, which could damage our brand.

Moreover, our Service requires high-bandwidth data capabilities. If the costs of data usage increase or access to data networks is limited, our business may be seriously harmed. Additionally, to deliver high-quality audio, video, and other content over networks, our Service must work well with a range of technologies, systems, networks, regulations, and standards that we do not control. In addition, the adoption of any laws or regulations that adversely affect the growth, popularity, or use of the internet, including laws governing internet neutrality, could decrease the demand for our Service and increase our cost of doing business. Previously, Federal Communications Commission (the "FCC") "open internet rules" included bright-line provisions prohibiting internet service providers from blocking lawful internet content, throttling such content, or engaging in paid prioritization, as well as a general conduct standard barring such providers from unreasonably interfering with or disadvantaging online content providers' access to end users and end users' access to online content. However, on December 14, 2017, the FCC voted to repeal these regulations, while leaving in place a revised set of disclosure obligations for internet service providers backed by potential enforcement by the Federal Trade Commission under its general authority to prevent unfair, deceptive, or anticompetitive practices. A number of parties appealed this order, and although the U.S. Court of Appeals for the D.C. Circuit largely rejected challenges to the FCC's order in October 2019, the petitioners may pursue further appellate proceedings before the Court of Appeals or the U.S. Supreme Court. Several states also have imposed their own open internet protections modeled on the repealed bright-line provisions, although internet service providers have filed lawsuits challenging such measures in two states, and additional challenges are likely. It is also possible that Congress may adopt legislation restoring some of the repealed FCC regulations. If, as a result of the repeal of these bright-line rules, internet service providers in the United States impede access to certain content, start entering into arrangements with specific content providers for faster or better access over their data networks, or otherwise unfairly discriminate against content providers like us, such conduct could increase our cost of doing business and put us at a competitive disadvantage relative to larger competitors. Additionally, if, as a result of the repeal of these bright-line rules, mobile providers attempt to limit our users' ability to access Spotify or make Spotify a less attractive alternative to our competitors' applications, our business, operating results, and financial condition would be seriously harmed.

The European Union (the "EU") currently requires equal access to internet content. If the EU or the courts modify these open internet rules, mobile providers may be able to limit our users' ability to access Spotify or make Spotify a less attractive alternative to our competitors' applications. If that occurs, our business, operating results, and financial condition would be seriously harmed. Additionally, as part of the EU's Digital Single Market initiative and the implementation of the European Electronic Communications Code at the national level, EU Member States may impose network security and disability access obligations on "over-the-top" services such as those provided by us, which could increase our costs. Based on the Directive on Copyright in the Digital Single Market, EU Member States are also required to implement new rules on copyright protection before 2021, including rules on

remuneration for use of copyrighted content and obligations on online content providers to compensate for breaches of copyright, which could also impact our costs or the conditions for users to access licensed content.

There can be no assurance that we will be able to comply with the requirements of various operating systems, online platforms, hardware, networks, regulations, and standards on which our Service depends, and failure to do so could result in serious harm to our business.

If our security systems are breached, we may face civil liability and/or statutory fines, and/or enforcement action causing us to change our practices, and public perception of our security measures could be diminished, either of which would negatively affect our ability to attract and retain Premium Subscribers, Ad-Supported Users, advertisers, content providers, and other business partners.

Techniques used to gain unauthorized access to data and software are constantly evolving, and we may be unable to anticipate or prevent unauthorized access to data pertaining to our users, including credit card and debit card information and other personal data about our users, business partners, and employees. Like all internet services, our Service, which is supported by our own systems and those of third parties that we work with, is vulnerable to software bugs, computer viruses, internet worms, break-ins, phishing attacks, attempts to overload servers with denial-of-service, or other attacks and similar disruptions from unauthorized use of our and third-party computer systems, any of which could lead to system interruptions, delays, or shutdowns, causing loss of critical data or unauthorized access to personal data. Computer malware, viruses, and computer hacking and phishing attacks have become more prevalent in our industry, have occurred on our systems in the past, and may occur on our systems in the future. Because of our prominence, we believe that we are a particularly attractive target for such attacks. Though it is difficult to determine what, if any, harm may directly result from any specific interruption or attack, any failure to maintain performance, reliability, security, and availability of our products and technical infrastructure to the satisfaction of our users may harm our reputation and our ability to retain existing users and attract new users. We cannot assure you that the systems and processes that we have designed to protect our data and our users' data, to prevent data loss, to disable undesirable accounts and activities on our platform, and to prevent or detect security breaches, will provide absolute security, and we may incur significant costs in protecting against or remediating cyber-attacks.

In addition, if an actual or perceived breach of security occurs to our systems or a third party's systems, we may face regulatory or civil liability and public perception of our security measures could be diminished, either of which would negatively affect our ability to attract and retain users, which in turn would harm our efforts to attract and retain advertisers, content providers, and other business partners. We also would be required to expend significant resources to mitigate the breach of security and to address matters related to any such breach. In Europe, we also may be required to notify European Data Protection Authorities, within strict time periods, about any personal data breaches, unless the personal data breach is unlikely to result in a risk to the rights and freedoms of the affected individuals. We may also be required to notify the affected individuals of the personal data breach where there is a high risk to their rights and freedoms. If we are found to have inadequate security measures in place (which, for example, results in a personal data breach), we could be fined up to EUR 20 million or 4% of worldwide annual turnover of the preceding financial year, whichever is greater. Any data breach by service providers that are acting as data processors (i.e., processing personal data on our behalf) could also mean that we are subject to these fines and have to comply with the notification obligations set out above.

Any failure, or perceived failure, by us to maintain the security of data relating to our users, to comply with our posted privacy policy, laws and regulations, rules of self-regulatory organizations, industry standards, and contractual provisions to which we may be bound, could result in the loss of confidence in us, or result in actions against us by governmental entities, data protection authorities, or others, all of which could result in litigation and financial losses, and could potentially cause us to lose users, advertisers, and revenues. Any of these events could have a material adverse effect on our business, operating results, and financial condition and could cause our stock price to drop significantly.

Our Service and software are highly technical and may contain undetected software bugs or vulnerabilities, which could manifest in ways that could seriously harm our reputation and our business.

Many of the products we offer are highly technical and complex, including (i) our Service, (ii) Spotify Connect, which allows users to use the Spotify application to transfer and control playback on speakers, TVs, cars, smart watches and other wearable devices, phones, tablets, computers, game consoles, and other devices, (iii) our application programming interfaces and software development kits, which enable users to interact with, and control playback from, the Service within third-party applications and services, and (iv) services we offer to artists, podcasters, publishers, and other creators, such as Spotify Analytics, Spotify for Artists, Spotify Publishing Analytics, Spotify Ad Studio, Spotify for Podcasters, Soundtrap, Anchor, and SoundBetter, which provide access to various tools. These products or any other product we may introduce in the future may contain undetected software bugs, hardware errors, and other vulnerabilities. These bugs and errors can manifest in any number of ways in our products, including through diminished performance, security vulnerabilities, malfunctions, or even permanently disabled products. We have a practice of rapidly updating our products, and as a result some errors in our products may be discovered only after a product has been used by users, and may in some cases be

detected only under certain circumstances or after extended use. Additionally, many of our products are available on multiple operating systems and/or multiple devices offered by different manufacturers, and changes or updates to such operating systems or devices may cause errors or functionality problems in our products, including rendering our products inoperable by some users. Any errors, bugs, or other vulnerabilities discovered in our code or backend after release could damage our reputation, drive away users, allow third parties to manipulate or exploit our software (including, for example, providing mobile device users a means to suppress advertisements without payment and gain access to features only available to the Ad-Supported Service on tablets and desktop computers), lower revenue, and expose us to claims for damages, any of which could seriously harm our business. See “— We are at risk of attempts to manipulate or exploit our software for the purpose of gaining or providing unauthorized access to certain features of our Service, and failure to effectively prevent and remediate such attempts could have an adverse impact on our business, operating results, and financial condition.” Additionally, errors, bugs, or other vulnerabilities may—either directly or if exploited by third parties—affect our ability to make accurate royalty payments. See “—Our royalty payment scheme is complex, and it is difficult to estimate the amount payable under our license agreements.”

We could also face claims for product liability, tort, or breach of warranty. Defending a lawsuit, regardless of its merit, is costly and may divert management’s attention and seriously harm our reputation and our business. In addition, if our liability insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business could be seriously harmed.

Interruptions, delays, or discontinuations in service arising from our own systems or from third parties could impair the delivery of our Service and harm our business.

We rely on systems housed in our own facilities and upon third parties, including bandwidth providers and third-party “cloud” data storage services, to enable our users to receive our content in a dependable, timely, and efficient manner. We have experienced, and may in the future experience, periodic service interruptions and delays involving our own systems and those of third parties that we work with. Both our own facilities and those of third parties are vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures, and similar events. They are also subject to break-ins, sabotage, intentional acts of vandalism, the failure of physical, administrative, technical, and cyber security measures, terrorist acts, natural disasters, human error, the financial insolvency of third parties that we work with, and other unanticipated problems or events. The occurrence of any of these events could result in interruptions in our Service and unauthorized access to, or alteration of, the content and data contained on our systems that these third parties store and deliver on our behalf.

Any disruption in the services provided by these third parties could materially adversely impact our business reputation, customer relations, and operating results. Upon expiration or termination of any of our agreements with third parties, we may not be able to replace the services provided to us in a timely manner or on terms and conditions, including service levels and cost, that are favorable to us, and a transition from one third party to another could subject us to operational delays and inefficiencies until the transition is complete.

We rely upon the Google Cloud Platform to operate certain aspects of our business and to store almost all of our data, and any disruption of or interference with our use of the Google Cloud Platform could have a material adverse effect on our business, operating results, and financial condition.

Google Cloud Platform (“GCP”) provides a distributed computing infrastructure platform for business operations, or what is commonly referred to as a cloud computing service. We have designed our software and computer systems to utilize data processing, storage capabilities, and other services provided by GCP. We have transitioned all of our primary data storage (including personal data of users and audio data licensed from rights holders) and computing from our own servers to GCP. We cannot easily switch our GCP operations to another cloud provider, and any disruption of, or interference with, our use of GCP could have a material adverse effect on our business, operating results, and financial condition. While the consumer side of Google competes with us, we do not believe that Google will use the GCP operation in such a manner as to gain competitive advantage against our Service. In 2018, we entered into a new service agreement with Google for the use of GCP. We must make minimum payments during the first three years of the service. As of December 31, 2019, the remaining minimum payments are approximately €138 million.

Assertions by third parties of infringement or other violation by us of their intellectual property rights could harm our business, operating results, and financial condition.

Third parties have asserted, and may in the future assert, that we have infringed, misappropriated, or otherwise violated their copyrights, patents, and other intellectual property rights, and as we face increasing competition, the possibility of intellectual property rights claims against us grows. See “Item 8.A. Consolidated Statements and Other Financial Information—Legal or Arbitration Proceedings.”

Our ability to provide our Service is dependent upon our ability to license intellectual property rights to audio content, including sound recordings, any musical compositions embodied therein, and podcasts, as well as visual and related content, such as music videos, clips, album cover art, artist images, and any other media assets that artists and/or labels can add or provide with their tracks. Various laws and regulations govern the copyright and other intellectual property rights associated with audio and visual content, including sound recordings and musical compositions. Existing laws and regulations are evolving and subject to different interpretations, and various legislative or regulatory bodies may expand current or enact new laws or regulations. Although we expend significant resources to seek to comply with the statutory, regulatory, and judicial frameworks by, for example, entering into license agreements, we cannot assure you that we are not infringing or violating any third-party intellectual property rights, or that we will not do so in the future. See “—Difficulties in obtaining accurate and comprehensive information necessary to identify the compositions embodied in sound recordings on our Service and the ownership thereof may impact our ability to perform our obligations under our licenses, affect the size of our catalog, impact our ability to control content acquisition costs, and lead to potential copyright infringement claims.” Moreover, while we may often be able to seek indemnities from our licensors with respect to infringement claims that may relate to the content they provide to us, such indemnities may not be sufficient to cover the associated liability if the licensor at issue does not have adequate financial resources.

In addition, music, internet, technology, and media companies are frequently subject to litigation based on allegations of infringement, misappropriation, or other violations of intellectual property rights. Many companies in these industries, including many of our competitors, have substantially larger patent and intellectual property portfolios than we do, which could make us a target for litigation. We may not be able to assert counterclaims against parties that sue us for patent, or other intellectual property infringement. In addition, various “non-practicing entities” that own patents and other intellectual property rights often attempt to aggressively assert claims in order to extract value from technology companies. Further, from time to time we may introduce new products and services, including in territories where we currently do not have an offering, which could increase our exposure to patent and other intellectual property claims from competitors and non-practicing entities. It is difficult to predict whether assertions of third-party intellectual property rights or any infringement or misappropriation claims arising from such assertions will substantially harm our business, operating results, and financial condition. If we are forced to defend against any infringement or misappropriation claims, whether they are with or without merit, are settled out of court, or are determined in our favor, we may be required to expend significant time and financial resources on the defense of such claims. Furthermore, an adverse outcome of a dispute may require us to pay significant damages, which may be even greater if we are found to have willfully infringed upon a party’s intellectual property; cease exploiting copyrighted content that we have previously had the ability to exploit; cease using solutions that are alleged to infringe or misappropriate the intellectual property of others; expend additional development resources to redesign our solutions; enter into potentially unfavorable royalty or license agreements in order to obtain the right to use necessary technologies, content, or materials; indemnify our partners and other third parties; and/or take other actions that may have material effects on our business, operating results, and financial condition.

Moreover, we rely on multiple software programmers to design our proprietary technologies, and we regularly contribute software source code under “open source” licenses and have made technology we developed available under open source licenses. We cannot assure you that our efforts to prevent the incorporation of licenses that would require us to disclose code and/or innovations in our products will always be successful, as we do not exercise complete control over the development efforts of our programmers, and we cannot be certain that our programmers have not used software that is subject to such licenses or that they will not do so in the future. In the event that portions of our proprietary technology are determined to be subject to licenses that require us to publicly release the affected portions of our source code, re-engineer a portion of our technologies, or otherwise be limited in the licensing of our technologies, we may be forced to do so, each of which could materially harm our business, operating results, and financial condition.

Failure to protect our intellectual property could substantially harm our business, operating results, and financial condition.

The success of our business depends on our ability to protect and enforce our patents, trade secrets, trademarks, copyrights, and all of our other intellectual property rights, including our intellectual property rights underlying our Service. We attempt to protect our intellectual property under patent, trade secret, trademark, and copyright law through a combination of intellectual property registration, employee, third-party assignment and nondisclosure agreements, other contractual restrictions, technological measures, and other methods. These afford only limited protection and we are still continuing to develop our processes for securing our intellectual property rights. Despite our efforts to protect our intellectual property rights, unauthorized parties may attempt to copy aspects of our product and brand features, or obtain and use our trade secrets and other confidential information. Moreover, policing our intellectual property rights is difficult and time-consuming. We cannot assure you that we would have adequate resources to protect and police our intellectual property rights, and we cannot assure you that the steps we take to do so will always be effective.

We have filed, and may in the future file, patent applications on certain of our innovations. It is possible, however, that these innovations may not be patentable. In addition, given the cost, effort, risks, and downside of obtaining patent protection, including the requirement to ultimately disclose the invention to the public, we may choose not to seek patent protection for some innovations.

Furthermore, our patent applications may not issue as granted patents, the scope of the protection gained may be insufficient or an issued patent may be deemed invalid or unenforceable. We also cannot guarantee that any of our present or future patents or other intellectual property rights will not lapse or be invalidated, circumvented, challenged, or abandoned. Neither can we guarantee that our intellectual property rights will provide competitive advantages to us. Our ability to assert our intellectual property rights against potential competitors or to settle current or future disputes could be limited by our relationships with third parties, and any of our pending or future patent applications may not have the scope of coverage originally sought. We cannot guarantee that our intellectual property rights will be enforced in jurisdictions where competition may be intense or where legal protection may be weak. We could lose both the ability to assert our intellectual property rights against, or to license our technology to, others and the ability to collect royalties or other payments.

We currently own the www.spotify.com internet domain name and various other related domain names. Internet regulatory bodies generally regulate domain names. If we lose the ability to use a domain name in a particular country, we may be forced either to incur significant additional expenses to market our Service within that country or, in extreme cases, to elect not to offer our Service in that country. Either result could harm our business, operating results, and financial condition. The regulation of domain names in the United States and in foreign countries is subject to change. Regulatory bodies could establish additional top-level domains, appoint additional domain name registrars, or modify the requirements for holding domain names. As a result, we may not be able to acquire or maintain the domain names that utilize our brand names in the United States or other countries in which we may conduct business in the future.

Litigation or proceedings before governmental authorities and administrative bodies may be necessary in the future to enforce our intellectual property rights, to protect our patent rights, trademarks, trade secrets, and domain names and to determine the validity and scope of the proprietary rights of others. Our efforts to enforce or protect our proprietary rights may be ineffective and could result in substantial costs and diversion of resources and management time, each of which could substantially harm our operating results. Additionally, changes in law may be implemented, or changes in interpretation of such laws may occur, that may affect our ability to protect and enforce our patents and other intellectual property.

Our user metrics and other estimates are subject to inherent challenges in measurement, and real or perceived inaccuracies in those metrics may seriously harm and negatively affect our reputation and our business.

We regularly review key metrics related to the operation of our business, including, but not limited to, our monthly active users (“MAUs”), Ad-Supported MAUs, Premium average revenue per user (“ARPU”), and Premium Subscribers, to evaluate growth trends, measure our performance, and make strategic decisions. These metrics are calculated using internal company data and have not been validated by an independent third party. While these numbers are based on what we believe to be reasonable estimates of our user base for the applicable period of measurement, there are inherent challenges in measuring how our Service is used across large populations globally. For example, we believe that while there are individuals who have multiple Spotify accounts, which we treat as multiple users for purposes of calculating our active users, there are also Spotify accounts that are used by more than one person. Accordingly, the calculations of our active users may not reflect the actual number of people using our Service. In addition, we are continually seeking to improve our estimates of our user base, and such estimates may change due to improvements or changes in our methodology, including improvements in our ability to identify and/or address previously undetected undesirable user behaviors. We cannot assure you that our efforts to improve our estimates of user base and to identify and/or address undesirable user behaviors will be successful, and these efforts could result in the removal of certain user accounts and/or a reduction in MAUs or other metrics.

Errors or inaccuracies in our metrics or data could result in incorrect business decisions and inefficiencies, including expending resources to implement unnecessary business measures or failing to take required actions to attract a sufficient number of users to satisfy our growth strategies.

In addition, advertisers generally rely on third-party measurement services to calculate metrics related to our advertising business, and these third-party measurement services may not reflect our true audience. Some of our demographic data also may be incomplete or inaccurate because users self-report their names and dates of birth or because we receive them from other third parties. Consequently, the personal data we have may differ from our users’ actual names and ages. If advertisers, partners, or investors do not perceive our user, geographic, or other demographic metrics to be accurate representations of our user base, or if we discover material inaccuracies in our user, geographic, or other demographic metrics, our reputation may be seriously harmed. See “—We rely on advertising revenue to monetize our Service, and any failure to convince advertisers of the benefits of advertising on our Service in the future could harm our business, operating results, and financial condition,” “—We are at risk of artificial manipulation of stream counts and failure to effectively manage and remediate such fraudulent streams could have an adverse impact on our business, operating results, and financial condition. Fraudulent streams and potentially associated fraudulent user accounts or artists may cause us to overstate key performance indicators, which once discovered, corrected, and disclosed, could undermine investor confidence in the integrity of our key performance indicators and could cause our stock price to drop significantly,” and “—We are at risk of attempts to manipulate or exploit our software for the purpose of gaining or providing unauthorized access to certain features of our

Service, and failure to effectively prevent and remediate such attempts could have an adverse impact on our business, operating results, and financial condition.”

We are at risk of artificial manipulation of stream counts and failure to effectively manage and remediate such fraudulent streams could have an adverse impact on our business, operating results, and financial condition. Fraudulent streams and potentially associated fraudulent user accounts or artists may cause us to overstate key performance indicators, which once discovered, corrected, and disclosed, could undermine investor confidence in the integrity of our key performance indicators and could cause our stock price to drop significantly.

We have in the past been, and continue to be, impacted by attempts by third parties to artificially manipulate stream counts. Such attempts may, for example, be designed to generate revenue for rights holders or to influence placement of content on Spotify-created playlists or industry music charts. These potentially fraudulent streams may involve creating non-bona fide user accounts or artists or using compromised passwords to access legitimate user accounts. For example, we have detected instances of botnet operators creating fake user accounts or hackers using passwords compromised as a result of a breach on a non-Spotify service to access legitimate user accounts and streaming specific content repeatedly, thereby generating royalties each time the content is streamed or increasing its visibility on our or third-party charts. We use a combination of algorithms and manual review by employees to detect fraudulent streams and aim to remove fake user accounts created for the above purposes and filter them out from our metrics on an ongoing basis, as well as to require users to reset passwords that we suspect have been compromised. However, we may not be successful in detecting, removing, and addressing all fraudulent streams and any related user accounts. If in the future we fail to successfully detect, remove, and address fraudulent streams and associated user accounts, it may result in the manipulation of our data, including the key performance indicators, which underlie, among other things, our contractual obligations with rights holders and advertisers (which could expose us to the risk of litigation), as well as harm our relationships with rights holders and advertisers. In addition, once we detect, correct, and disclose fraudulent streams and associated user accounts, this may result in the removal of certain user accounts and/or a reduction in account activity, which may affect key performance indicators and undermine investor confidence in the integrity of our key performance indicators. These could have a material adverse impact on our business, operating results, and financial condition.

We are at risk of attempts to manipulate or exploit our software for the purpose of gaining or providing unauthorized access to certain features of our Service, and failure to effectively prevent and remediate such attempts could have an adverse impact on our business, operating results, and financial condition.

We have in the past been, and continue to be, impacted by attempts by third parties to manipulate or exploit our software for the purpose of gaining or providing unauthorized access to certain features of our Service. For example, we have detected instances of third parties seeking to provide mobile device users a means to suppress advertisements without payment and gain access to features only available to the Ad-Supported Service on tablets and desktop computers. If we fail to successfully detect and address such issues, it may have artificial effects on our key performance indicators, such as MAUs, which underlie, among other things, our contractual obligations with rights holders and advertisers (which could expose us to the risk of litigation), as well as harm our relationship with rights holders and advertisers. The discovery or development of any new method to gain unauthorized access to certain features of our Service, such as through the exploitation of software vulnerabilities, and the sharing of any such method among third parties, may increase the level of unauthorized access (and the attendant negative financial impact described above). We cannot assure you we will be successful in finding ways to effectively address unauthorized access achieved through any such method. Additionally, compared to our Ad-Supported Users, individuals using unauthorized versions of our application may be less likely to convert to Premium Subscribers. Moreover, once we detect and disable such unauthorized access, this may result in the removal of certain user accounts and/or a reduction in account activity, which may affect our key performance indicators and could undermine investor confidence in the integrity of our key performance indicators. These could have a material adverse impact on our business, operating results, and financial condition.

Our business is subject to a variety of laws around the world. Government regulation of the internet is evolving and any changes in government regulations relating to the internet or other areas of our business or other unfavorable developments may adversely affect our business, operating results, and financial condition.

We are an international company that is registered under the laws of Luxembourg, with offices and/or operations in 79 countries and territories around the world. As a result of this organizational structure and the scope of our operations, we are subject to a variety of laws in different countries. The scope and interpretation of the laws that are or may be applicable to us are often uncertain and may be conflicting. It is also likely that if our business grows and evolves and our solutions are used more globally, we will become subject to laws and regulations in additional jurisdictions. It is difficult to predict how existing laws will be applied to our business and the new laws to which we may become subject.

We are subject to general business regulations and laws, as well as regulations and laws specific to the internet. Such laws and regulations include, but are not limited to, labor, advertising and marketing, real estate, taxation, user privacy, data collection and protection, intellectual property, anti-corruption, anti-money laundering, sanctions, foreign exchange controls, antitrust and competition, electronic contracts, telecommunications, sales procedures, automatic subscription renewals, credit card processing procedures, consumer protections, broadband internet access, and content restrictions. We cannot guarantee that we have been or will be fully compliant in every jurisdiction in which we are subject to regulation, as existing laws and regulations governing issues such as intellectual property, privacy, taxation, and consumer protection, among others, are constantly changing. The adoption or modification of laws or regulations relating to the internet or other areas of our business could limit or otherwise adversely affect the manner in which we currently conduct our business. For example, certain jurisdictions have implemented or are contemplating implementing laws that may negatively impact our automatic renewal structure or our free or discounted trial incentives. Further, compliance with laws, regulations, and other requirements imposed upon our business may be onerous and expensive, and they may be inconsistent from jurisdiction to jurisdiction, further increasing the cost of compliance and doing business.

Moreover, as internet commerce continues to evolve, increasing regulation by U.S. federal and state agencies and other international regulators becomes more likely and may lead to more stringent consumer protection laws, which may impose additional burdens on us. The adoption of any laws or regulations that adversely affect the popularity or growth in use of the internet, including laws limiting internet neutrality, artificial intelligence, or machine learning, could decrease user demand for our Service and increase our cost of doing business. Future regulations, or changes in laws and regulations or their existing interpretations or applications, could also hinder our operational flexibility, raise our compliance costs, and result in additional historical or future liabilities for us, resulting in material adverse impacts on our business, operating results, and financial condition.

Various regulations as well as self-regulation related to privacy and data security concerns pose the threat of lawsuits, regulatory fines and other liability, require us to expend significant resources, and may harm our business, operating results, and financial condition.

As we collect and utilize personal data about our users as they interact with our Service, we are subject to new and existing laws and regulations that govern our use of user data. We are likely to be required to expend significant capital to ensure ongoing compliance with these laws and regulations. Claims or allegations that we have violated laws and regulations relating to privacy and data security could result in negative publicity and a loss of confidence in us by our users and our partners. We may be required to make significant expenditure to resolve these issues and we could be subject to civil liability and/or fines or other penalties, including by government and data protection authorities.

The General Data Protection Regulation (“GDPR”), which came into effect on May 25, 2018, implemented stringent operational requirements for companies that are established in the EU or, where not established in the EU, offer goods or services to individuals in the EU or monitor the behavior of individuals in the EU. Failure to comply with the GDPR can result in fines of up to EUR 20 million or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher.

The requirements of the GDPR include, for example, expanded disclosures about how personal data is processed, mandatory data breach notification requirements, a strengthened data subject rights regime and higher standards for obtaining consent from individuals to process their personal data (including in certain circumstances for marketing), all of which involve significant ongoing expenditure. The principle of accountability likewise requires us to put significant documentation in place to demonstrate compliance. While the GDPR in large part harmonizes data protection requirements across EU countries, some provisions allow EU Member States to adopt additional or different requirements, which could limit our ability to use and share personal data or could require localized changes to our operating model. For example, Member States have adopted different ages at which parental consent is required to process the personal data of children. This has required us to adopt mechanisms which ensure effective age-gating which may lead us to incur operating costs. Separately, we rely on third parties to carry out a number of services for us (for example, cloud-based vendors), including processing personal data on our behalf, and while we enter into contractual arrangements to ensure that they only process such data according to our instructions and have sufficient security measures in place, any security breach, non-compliance with our contractual terms or breach of applicable law by such third parties could result in governmental or regulatory enforcement actions, litigation, fines and penalties or adverse publicity and could cause our users to lose trust in us, which could have an adverse impact on our reputation and business. We are also likely to be affected by legal challenges to the validity of EU mechanisms for transfers of personal data outside the EU (such as the Privacy Shield Framework and the standard contractual clauses), and our business could be impacted by changes in law as a result of future review of these mechanisms by European courts or regulators under EU law, as well as current challenges to these mechanisms in the European courts.

The GDPR together with recent regulatory guidance has changed the requirements relating to cookies and similar technologies. In the EU, under the current Directive 2002/58 on Privacy and Electronic Communications (the “ePrivacy Directive”), informed and freely given consent is required for the placement of certain cookies on a user’s device. The GDPR has raised the standard of consent in the EU so that it has to be fully informed, freely given, specific and opt-in, which could, as companies move towards this model,

impact user uptake and the ability to generate revenue from advertising. In addition, the ePrivacy Directive is going through the European legislative process. A draft of the new Regulation (EC) 2017/0003 concerning the respect for private life and the protection of personal data in electronic communications (the “e-Privacy Regulations”) is intended to replace the ePrivacy Directive and is likely to codify the existing rules around the use of cookies and similar technologies and may place broader restrictions on our online activities, including efforts to understand our user’s internet usage and advertise to them. The e-Privacy Regulations may also extend strict marketing rules with limited exceptions to business to business communications, and will significantly increase penalties.

Existing privacy-related laws and regulations in the EU, United States, and in other countries are evolving and are subject to potentially differing interpretations, and various U.S. federal and state or other international legislative and regulatory bodies may expand or enact laws regarding privacy and data security-related matters. The state of California enacted the California Consumer Privacy Act (“CCPA”), which came into effect on January 1, 2020, and imposes heightened transparency obligations and creates new data privacy rights for California residents. Failure to comply with the CCPA can result in fines of up to \$7,500 per intentional violation and \$2,500 per other violation. Consumers have a private right of action with respect to certain data breaches and can recover civil damages of up to \$750 per incident, per consumer or actual damages, whichever is greater. Similar laws coming into effect in other states, adoption of a comprehensive federal data privacy law, and new legislation in international jurisdictions may continue to change the data protection landscape globally and could result in us expending considerable resources to meet these requirements.

We may find it necessary or desirable to join self-regulatory bodies or other privacy-related organizations that require compliance with their rules pertaining to privacy and data security. We also may be bound by contractual obligations that limit our ability to collect, use, disclose, share, and leverage user data and to derive economic value from it. New laws, amendments to, or reinterpretations of existing laws, rules of self-regulatory bodies, industry standards, and contractual obligations, as well as changes in our users’ expectations and demands regarding privacy and data security, may limit our ability to collect, use, and disclose, and to leverage and derive economic value from user data. Restrictions on our ability to collect, access and harness user data, or to use or disclose user data, may require us to expend significant resources to adapt to these changes, and would in turn limit our ability to stream personalized content to our users and offer advertising and promotional opportunities to users on the Service.

We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols imposed by law, regulation, self-regulatory bodies, industry standards, and contractual obligations. Any failure to comply with privacy laws could result in litigation, regulatory or governmental investigations, enforcement action requiring us to change the way we use personal data, restrictions on how we use personal data, or significant regulatory fines. In addition to statutory enforcement, a data breach could lead to compensation claims by affected individuals (including consumer advocacy groups), negative publicity and a potential loss of business as a result of customers losing trust in us. Such failures could have a material adverse effect on our financial condition and operations.

Changes in regulations or user concerns regarding privacy and protection of user data, or any failure or appearance of failure to comply with such laws, could diminish the value of our Service and cause us to lose users and revenue.

The regulatory framework for privacy issues worldwide is currently in flux and is likely to remain so for the foreseeable future. Practices regarding the collection, use, storage, transmission, and security of personal data by companies operating over the internet have recently come under increased public scrutiny. The U.S. government, including the Federal Trade Commission and the Department of Commerce, as well as other national, state, and local governments, may continue to review the need for greater regulation over the collection of information concerning consumer behavior on the internet, including regulation aimed at restricting certain targeted advertising practices. In addition, the EU may continue to review the need for greater regulation or reform to its existing data protection legal framework, which may result in a greater compliance burden for companies with users in Europe. Various government and consumer agencies also have called for new regulation and changes in industry practices. Our business, including our ability to operate and expand internationally, could be adversely affected if legislation or regulations are adopted, interpreted, or implemented in a manner that is inconsistent with our current business practices and that require changes to these practices, the design of our website, services, features, or our privacy policy. In particular, the success of our business has been, and we expect will continue to be, driven by our ability to responsibly use the personal data that our users share with us. Therefore, our business could be harmed by any significant change to applicable laws, regulations, or industry practices regarding the use of our users’ personal data — for example, regarding the manner in which disclosures are made and how consent or other legal basis for the use of personal data is obtained. Such changes may require us to modify our services and features, possibly in a material manner, and may limit our ability to develop new services and features that make use of the data that our users voluntarily share with us. In addition, some of our developers or other partners, such as those that help us measure the effectiveness of ads, may receive or store information provided by us or by our users through mobile or web applications integrated with our Service. We provide limited information to such third parties based on the scope of services provided to us. However, if these third parties or developers fail to adopt or adhere to adequate data security and purpose limitation practices, or in the event of a breach of their networks, our data or our

users' data may be improperly accessed, used, or disclosed. Such failures could have a material adverse effect on our business, operating results, and financial condition.

If we fail to implement and maintain effective internal control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

We are required to maintain internal control over financial reporting and to report any material weaknesses in those controls. We previously identified a material weakness in our internal control over financial reporting that related to accounting for rights holder liabilities. During 2019, we took a number of actions designed to remediate this material weakness, including the hiring of additional accounting, finance, system engineers, and data analysts, and the implementation of new controls, processes, and technologies over the calculation, processing, reconciliations, and analysis of right holder liabilities. Based on the testing of operating effectiveness of these controls completed to date, as of December 31, 2019, the previously identified material weakness has been remediated.

If we identify future material weaknesses in our internal control over financial reporting or fail to meet our obligations as a public company, including the requirements of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), we may be unable to accurately report our financial results, or report them within the timeframes required by law or stock exchange regulations, and we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our ordinary shares to decline. Under Section 404 of the Sarbanes-Oxley Act, we are required to evaluate and determine the effectiveness of our internal control over financial reporting and provide a management report as to internal control over financial reporting. Failure to maintain effective internal control over financial reporting also could potentially subject us to sanctions or investigations by the SEC, the NYSE, or other regulatory authorities, or shareholder lawsuits, which could require additional financial and management resources. We cannot assure you that additional material weaknesses will not occur in the future, which could materially adversely affect our business, operating results, and financial condition.

We rely on advertising revenue to monetize our Service, and any failure to convince advertisers of the benefits of advertising on our Service in the future could harm our business, operating results, and financial condition.

Our ability to attract and retain advertisers, and ultimately to generate advertising revenue, depends on a number of factors, including:

- increasing the number of hours our Ad-Supported Users spend listening to audio or otherwise engaging with content on our Ad-Supported Service;
- increasing the number of Ad-Supported Users;
- keeping pace with changes in technology and our competitors;
- competing effectively for advertising dollars with other online and mobile marketing and media companies;
- maintaining and growing our relationships with marketers, agencies, and other demand sources who purchase advertising inventory from us;
- implementing and maintaining an effective infrastructure for order management; and
- continuing to develop and diversify our advertising platform and offerings, which currently include delivery of advertising products through multiple delivery channels, including traditional computers, mobile, and other connected devices, and multiple content types, including podcasts.

We may not succeed in capturing a greater share of our advertisers' core marketing budgets, particularly if we are unable to achieve the scale, reach, products, and market penetration necessary to demonstrate the effectiveness of our advertising solutions, or if our advertising model proves ineffective or not competitive when compared to other alternatives and platforms through which advertisers choose to invest their budgets.

Failure to grow the Ad-Supported User base and to effectively demonstrate the value of our Ad-Supported Service and other similar offerings on the Service to advertisers could result in loss of, or reduced spending by, existing or potential future advertisers, which would materially harm our business, operating results, and financial condition.

Selling advertisements requires that we demonstrate to advertisers that our offerings on the Service are effective. For example, we need to show that our Ad-Supported Service has substantial reach and engagement by relevant demographic audiences. Some of our demographic data may be incomplete or inaccurate. For example, because Ad-Supported Users self-report their personal data, which may include their genders and dates of birth, the personal data we have may differ from our Ad-Supported Users' actual genders and ages. If our Ad-Supported Users provide us with incorrect or incomplete information regarding their personal data, such

as genders, age, or other attributes we use to target advertisements to users, or the data are otherwise not available to us, then we may fail to target the correct demographic with our advertising. Advertisers often rely on third parties to quantify the reach and effectiveness of our ad products. These third-party measurement services may not reflect our true audience or the performance of our ad products, and their underlying methodologies are subject to change at any time. In addition, the methodologies we apply to measure the key performance indicators that we use to monitor and manage our business may differ from the methodologies used by third-party measurement service providers, who may not integrate effectively with our Ad-Supported Service. Measurement technologies for mobile devices may be even less reliable in quantifying the reach and usage of our Ad-Supported Service, and it is not clear whether such technologies will integrate with our systems or uniformly and comprehensively reflect the reach, usage, or overall audience composition of our Ad-Supported Service. If such third-party measurement providers report lower metrics than we do, there is wide variance among reported metrics, or we cannot adequately integrate with such services that advertisers require, our ability to convince advertisers of the benefits of our Ad-Supported Service could be adversely affected. See “—Our user metrics and other estimates are subject to inherent challenges in measurement, and real or perceived inaccuracies in those metrics may seriously harm and negatively affect our reputation and our business.”

Emerging industry trends in digital advertising may pose challenges for our ability to forecast or optimize our advertising inventory, which may adversely impact our Ad-Supported revenue.

The digital advertising industry is introducing new ways to measure and price advertising inventory. For example, a significant portion of advertisers are in the process of moving from purchasing advertisement impressions based on the number of advertisements served by the applicable ad server to a new “viewable” impression standard (based on number of pixels in view and duration) for select products. In the absence of a uniform industry standard, agencies, advertisers, and other third parties have adopted several different measurement methodologies and standards. In addition, measurement services may require technological integrations, which are still being evaluated by the advertising industry without an agreed-upon industry standard metric. Other advertisers will measure the effectiveness of their advertising campaigns based on our ability to serve their ads to audiences that match their demographic data benchmarks, and our ability to meet the requirements of these third party measurement providers may be impacted when we do not have accurate or complete user data. As these trends in the industry continue to evolve, our advertising revenue may be adversely affected by the availability, accuracy, and utility of analytics and measurement technologies as well as our ability to successfully implement and operationalize such technologies and standards.

Further, the digital advertising industry is shifting to data-driven technologies and advertising products, such as automated buying. These data-driven advertising products and automated buying technologies allow publishers and advertisers to use data to target advertising toward specific groups of users who are more likely to be interested in the advertising message delivered to them. These advertising products and programmatic technologies may not integrate with our Ad-Supported Service, especially our desktop software version, as they are currently more technologically developed and more widely adopted by the advertising industry on the web than they are on mobile or on other software applications. Because the majority of our Ad-Supported User hours occur on mobile devices, if we are unable to deploy effective solutions to monetize the mobile device usage by our Ad-Supported User base, our ability to attract advertising spend, and ultimately our advertising revenue, may be adversely affected by this shift. In addition, we rely on third-party advertising technology platforms to participate in automated buying, and if these platforms cease to operate or experience instability in their business models, it also may adversely affect our ability to capture advertising spend. The evolution of privacy laws, including the GDPR, CCPA and the e-Privacy Regulation (which is still in draft form), may also impact the way we generate revenue from advertising. See “—Various regulations as well as self-regulation related to privacy and data security concerns pose the threat of lawsuits, regulatory fines, and other liability, require us to expend significant resources, and may harm our business, operating results, and financial condition.”

Negative media coverage could adversely affect our business.

We receive a high degree of media coverage around the world. Unfavorable publicity regarding, for example, payments to record labels, publishers, artists, and other copyright owners, our privacy practices, terms of service, service changes, service quality, litigation or regulatory activity, government surveillance, the actions of our advertisers, the actions of our developers whose services are integrated with our Service, the use of our Service for illicit, objectionable, or illegal ends, the actions of our users, the quality and integrity of content shared on our Service, or the actions of other companies that provide similar services to us, could materially adversely affect our reputation. Such negative publicity also could have an adverse effect on the size, engagement, and loyalty of our user base and result in decreased revenue, which could materially adversely affect our business, operating results, and financial condition.

Our business depends on a strong brand, and any failure to maintain, protect, and enhance our brand would hurt our ability to retain or expand our base of Ad-Supported Users, Premium Subscribers, and advertisers.

We have developed a strong brand that we believe has contributed significantly to the success of our business. Maintaining, protecting, and enhancing the “Spotify” brand is critical to expanding our base of Ad-Supported Users, Premium Subscribers, and advertisers, and will depend largely on our ability to continue to develop and provide an innovative and high-quality experience for our users and to attract advertisers, content owners, mobile device manufacturers, and other consumer electronic product manufacturers to work with us, which we may not do successfully. If we do not successfully maintain a strong brand, our business could be harmed.

Our brand may be impaired by a number of other factors, including any failure to keep pace with technological advances on our platform or with our Service, slower load times for our Service, a decline in the quality or quantity of the content available on our Service, a failure to protect our intellectual property rights, or any alleged violations of law, regulations, or public policy. Additionally, the actions of our developers, advertisers, and content partners may affect our brand if users do not have a positive experience using third-party applications or websites integrated with Spotify or that make use of Spotify content, or brand features. Further, if our partners fail to maintain high standards for products that are integrated into our Service, fail to display our trademarks on their products in breach of our agreements with them, or use our trademarks incorrectly or in an unauthorized manner, or if we partner with manufacturers of products that our users reject, the strength of our brand could be adversely affected.

If we are unable to maintain the growth rate in the number of our Ad-Supported Users and Premium Subscribers, we may be required to expend greater resources than we currently spend on advertising, marketing, and other brand-building efforts to preserve and enhance consumer awareness of our brand, which would adversely affect our operating results and may not be effective.

Our trademarks, trade dress, and other designations of origin are important elements of our brand. We have registered “Spotify” and other marks as trademarks in the United States and certain other jurisdictions around the world. Nevertheless, competitors or other companies may adopt marks similar to ours, or use our marks and confusingly similar terms as keywords in internet search engine advertising programs, thereby impeding our ability to build brand identity and possibly leading to confusion among our users. We cannot assure you that our trademark applications, even for key marks, will be approved. We may face opposition from third parties to our applications to register key trademarks in foreign jurisdictions in which we have expanded or may expand our presence. If we are unsuccessful in defending against these oppositions, our trademark applications may be denied. Whether or not our trademark applications are denied, third parties may claim that our trademarks infringe upon their rights. As a result, we could be forced to pay significant settlement costs or cease the use of these trademarks and associated elements of our brand in those or other jurisdictions. Doing so could harm our brand or brand recognition and adversely affect our business, operating results, and financial condition.

We may be subject to disputes or liabilities associated with content made available on our Service.

We provide various services and products that enable artists, podcasters, and other creators or users to make content available on our Service. For example, creators or users can record and distribute podcasts using Anchor and can upload cover art and profile images. These may subject us to heightened risk of claims of intellectual property infringement by third parties if such creators do not obtain the appropriate authorizations from rights holders. We are dependent on those who provide content on our Service complying with the terms and conditions of any license agreements with us as well as our Terms and Conditions of Use, which prohibit providing content that infringes the intellectual property or proprietary rights of third parties or is otherwise legally actionable pursuant to privacy and/or publicity rights. However, we cannot guarantee that the creators and users who provide content on our Service will comply with their obligations, and any failure of creators and users to do so may materially impact our business, operating results, and financial condition. In addition, while we may avail ourselves of various legal safe harbors related to third-party content, we cannot be certain that courts will always agree that these safe harbors apply. We also face a risk that the laws related to these safe harbors or the removal of content could change. Changes in any such laws that shield us from liability could materially harm our business, operating results, and financial condition.

We also cannot guarantee the integrity of the content third parties make available on our Service, which may adversely affect our reputation and our business. Given the large volume of content that various third parties, including record labels, distributors, aggregators, podcasters, and our users, make available on our platform, it is challenging for us to accurately verify the legitimacy of such content, including their copyright status and whether such content implicates the legal rights of third parties, or review and moderate such content to ensure that our users find the content provided by our Service to be trustworthy and safe or that such content is otherwise in compliance with our policies. If we fail to build and maintain an effective system to moderate the content on our platform, our users may lose trust in us, our reputation may be impaired and our business may be adversely affected.

We are subject to a number of risks related to credit card and debit card payments we accept.

We accept payments mainly through credit and debit card transactions. For credit and debit card payments, we pay interchange and other transaction fees, which may increase over time. An increase in those fees would require us to either increase the prices we charge for our Premium Service, which could cause us to lose Premium Subscribers and subscription revenue, or suffer an increase in our costs without a corresponding increase in the price we charge for our Premium Service, either of which could harm our business, operating results, and financial condition.

Additionally, we rely on third-party service providers for payment processing services, including the processing of credit and debit cards. In particular, we rely on one third-party service provider, Adyen, for approximately 74% of our payment processing. Our business could be materially disrupted if these third-party service providers become unwilling or unable to provide these services to us.

If we or our service providers for payment processing services have problems with our billing software, or the billing software malfunctions, it could have a material adverse effect on our user satisfaction and could cause one or more of the major credit card companies to disallow our continued use of their payment products. In addition, if our billing software fails to work properly and, as a result, we do not automatically charge our Premium Subscribers' credit cards on a timely basis or at all, our business, operating results, and financial condition could be materially adversely affected.

We are also subject to payment card association operating rules, certification requirements, and rules governing electronic funds transfers, which could change or be reinterpreted to make it more difficult for us to comply. Currently, we are fully compliant with the Payment Card Industry Data Security Standard v3.2.1 ("PCI DSS"), a security standard with which companies that collect, store, or transmit certain data regarding credit and debit cards, credit and debit card holders, and credit and debit card transactions are required to comply. This is an annual certification exercise, and if we fail to comply, we may violate payment card association operating rules, U.S. federal and state laws and regulations, and the terms of our contracts with payment processors and merchant banks. Such failure to comply fully also may subject us to fines, penalties, damages, and civil liability, and may result in the loss of our ability to accept credit and debit card payments. Further, there is no guarantee that, even if we are in compliance with PCI DSS, we will maintain PCI DSS compliance or that such compliance will prevent illegal or improper use of our payment systems or the theft, loss, or misuse of data pertaining to credit and debit cards, credit and debit card holders, and credit and debit card transactions. Other payment card associations have proposed additional requirements for trial offers for automatic renewal subscription services, which may hinder our ability to attract or retain Premium Subscribers.

If we fail to adequately control fraudulent credit card transactions, we may face civil liability, diminished public perception of our security measures, and significantly higher credit card-related costs, each of which could adversely affect our business, financial condition, and results of operations. If we are unable to maintain our chargeback rate or refund rates at acceptable levels, credit card and debit card companies may increase our transaction fees or terminate their relationships with us. Any increases in our credit card and debit card fees could adversely affect our results of operations, particularly if we elect not to raise our rates for our Premium Service to offset the increase. The termination of our ability to process payments on any major credit or debit card would significantly impair our ability to operate our business.

We are subject to a number of risks related to other payment solution providers.

We accept payments through various payment solution providers, such as telco integrated billings and prepaid codes vendors. These payment solution providers provide services to us in exchange for a fee, which may be subject to change. Furthermore, we rely on their accurate and timely reports on sales and redemptions. If such accurate and timely reports are not being provided, it will affect the accuracy of our reports to our licensors, and also affect the accuracy of our financial reporting.

We depend on highly skilled key personnel to operate our business, and if we are unable to attract, retain, and motivate qualified personnel, our ability to develop and successfully grow our business could be harmed.

We believe that our future success is highly dependent on the talents and contributions of our senior management, including Daniel Ek, our Chief Executive Officer, members of our executive team, and other key employees, such as key engineering, finance, research and development, marketing, and sales personnel. Our future success depends on our continuing ability to attract, develop, motivate, and retain highly qualified and skilled employees. All of our employees, including our senior management, are free to terminate their employment relationship with us at any time, and their knowledge of our business and industry may be difficult to replace. Qualified individuals are in high demand, particularly in the digital media industry, and we may incur significant costs to attract them. We use equity awards to attract talented employees. If the value of our ordinary shares declines significantly and remains depressed, that may prevent us from recruiting and retaining qualified employees. If we are unable to attract and retain our senior management and key employees, we may not be able to achieve our strategic objectives, and our business could be harmed. In addition, we believe that our key executives have developed highly successful and effective working relationships. We cannot assure you that we will be able to retain the services of any members of our senior management or other key employees. If one or more of these individuals leave, we may not be able to fully integrate new executives or replicate the current dynamic, and working relationships that have developed among our senior management and other key personnel, and our operations could suffer.

We have acquired and invested in, and may continue to acquire or invest in, other companies or technologies, which could divert management's attention and otherwise disrupt our operations and harm our operating results. We may fail to acquire or invest in companies whose market power or technology could be important to the future success of our business.

We have recently acquired and invested in, and may in the future seek to acquire or invest in, other companies or technologies that we believe could complement or expand our Service, enhance our technical capabilities or content offerings, or otherwise offer growth opportunities. Pursuit of future potential acquisitions or investments may divert the attention of management and cause us to incur various expenses in identifying, investigating, and pursuing suitable opportunities, whether or not they are consummated. In addition, we have limited experience acquiring and integrating other businesses. We may be unsuccessful in integrating our recently acquired businesses or any additional business we may acquire in the future, and we may fail to acquire companies whose market power or technology could be important to the future success of our business.

We also may not achieve the anticipated benefits from any acquisition or investment due to a number of factors, including:

- unanticipated costs or liabilities associated with the acquisition or investment, including costs or liabilities arising from the acquired companies' failure to comply with intellectual property laws and licensing obligations they are subject to;
- incurrence of acquisition- or investment-related costs;
- diversion of management's attention from other business concerns;
- regulatory uncertainties;
- harm to our existing business relationships with business partners and advertisers as a result of the acquisition or investment;
- harm to our brand and reputation;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition or investment.

If we acquire or invest in other companies, these acquisitions or investments may reduce our operating margins for the foreseeable future. In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill, which must be assessed for impairment at least annually. The market value of our investments may also fluctuate due to volatility in the share price used to measure the investment. For example, the majority of our long term investments relate to Tencent Music Entertainment ("TME"). Please see "Item 11. Quantitative and Qualitative Disclosures About Market Risk – Investment Risk" for a discussion of the risk relating to our long term investment in TME. In the future, if our acquisitions or investments do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process. Acquisitions or investments could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if a business we acquire or invest in fails to meet our expectations, our business, operating results, and financial condition may suffer.

We have also entered into, and may in the future enter into, additional, strategic alliances with certain partners that we believe will help advance the success of our business. Such partnerships may divert management focus and resources from other aspects of

our business, it may take longer than expected for them to produce the expected benefits, they may subject us to additional and unknown licensing or regulatory requirements across different jurisdictions, and they may fail to produce all of the expected benefits. For example, we recently announced our membership in the Libra Association, which plans to administer a global digital currency that could provide a lower-cost method for customers to pay for services, including our Service and other products. Libra is a novel project that has attracted regulatory scrutiny that could prevent its launch or limit the scope of its adoption. The success of Libra and other partnerships will depend in part on our ability to leverage them to enhance our Service and other products, or to develop new services and products, and we may not be successful in doing so. Any adverse results related to our strategic partnerships could negatively impact our business, operating results, and financial condition.

Our operating results may fluctuate, which makes our results difficult to predict.

Our revenue and operating results could vary significantly from quarter to quarter and year to year because of a variety of factors, many of which are outside our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Factors that may contribute to the variability of our quarterly and annual results include:

- our ability to retain our current user base, increase our number of Ad-Supported Users and Premium Subscribers, and increase users' time spent streaming content on our Service;
- our ability to more effectively monetize our Service on mobile and other connected devices, particularly as the number of our users on mobile and other connected devices grow;
- our ability to effectively manage our growth;
- our ability to attract user and/or customer adoption of and generate significant revenue from new products, services, and initiatives;
- our ability to attract and retain existing advertisers and prove that our advertising products are effective enough to justify a pricing structure that is profitable for us;
- the effects of increased competition in our business;
- our ability to keep pace with changes in technology and our competitors;
- lack of accurate and timely reports and invoices from our rights holders and partners;
- interruptions in service, whether or not we are responsible for such interruptions, and any related impact on our reputation;
- our ability to pursue and appropriately time our entry into new geographic or content markets and, if pursued, our management of this expansion;
- costs associated with defending any litigation, including intellectual property infringement litigation;
- the impact of general economic conditions on our revenue and expenses; and
- changes in regulations affecting our business.

Seasonal variations in user and marketing behavior may also cause fluctuations in our financial results. We expect to experience some effects of seasonal trends in user behavior due to increased internet usage and sales of streaming service subscriptions and devices during holiday periods. We may also experience higher advertising sales during the fourth quarter of each calendar year due to greater advertiser demand during the holiday season, but also incur greater marketing expenses as we attempt to attract new users to our Service and convert our Ad-Supported Users to Premium Subscribers. In addition, expenditures by advertisers tend to be cyclical and are often discretionary in nature, reflecting overall economic conditions, the economic prospects of specific advertisers or industries, budgeting constraints and buying patterns, and a variety of other factors, many of which are outside our control.

We may require additional capital to support business growth and objectives, and this capital might not be available on acceptable terms, if at all.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new features or enhance our existing Service, expand into additional markets around the world, improve our infrastructure, or acquire complementary businesses and technologies. Accordingly, we have in the past engaged, and may in the future engage, in equity and debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our existing shareholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences, and privileges superior to those of holders of our ordinary shares. Any debt financing we secure in the future could also contain restrictive covenants relating to our capital-raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and pursue business opportunities, including potential acquisitions. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth, acquire or retain users, and to respond to business challenges could be significantly impaired, and our business may be harmed.

If currency exchange rates fluctuate substantially in the future, the results of our operations, which are reported in Euros, could be adversely affected.

As we continue to expand our international operations, we become increasingly exposed to the effects of fluctuations in currency exchange rates. We incur expenses for employee compensation, property leases, and other operating expenses in the local currency, and an increasing percentage of our international revenue is from users who pay us in currencies other than U.S. dollars and Euros, including the Swedish Krona, the Australian dollar, and the British Pound Sterling. In addition, while we incur royalty expenses primarily in U.S. dollars and Euros, the corresponding revenues are being generated in local currencies and, as such, the multiple currency conversions will be affected by currency fluctuations, which may result in losses to us. Fluctuations in the exchange rates between the Euro and other currencies may impact expenses as well as revenue, and consequently have an impact on margin and the reported operating results. This could have a negative impact on our reported operating results. To date, we have engaged in limited hedging strategies related to foreign exchange risk stemming from our operations. These strategies may include instruments such as foreign exchange forward contracts and options. However, these strategies should not be expected to fully eliminate the foreign exchange rate risk that we are exposed to.

The impact of worldwide economic conditions may adversely affect our business, operating results, and financial condition.

Our financial performance is subject to worldwide economic conditions and their impact on levels of advertising spending. Expenditures by advertisers generally tend to reflect overall economic conditions, and to the extent that the economy continues to stagnate, reductions in spending by advertisers could have a material adverse impact on our business. Historically, economic downturns have resulted in overall reductions in advertising spending.

Economic conditions may adversely impact levels of consumer spending, which could adversely impact the number of users who purchase our Premium Service on our website and mobile application. Consumer purchases of discretionary items generally decline during recessionary periods and other periods in which disposable income is adversely affected. To the extent that overall economic conditions reduce spending on discretionary activities, our ability to retain current and obtain new Premium Subscribers could be hindered, which could reduce our subscription revenue and negatively impact our business. For example, under the terms of a withdrawal agreement between the United Kingdom and the EU, the United Kingdom formally left the EU on January 31, 2020. The United Kingdom will be subject to a transitional period until December 31, 2020 and negotiations are ongoing to determine the future terms of the United Kingdom's relationship with the EU. Although it is unknown what the result of those negotiations will be, it is possible that new terms, as well as the continued uncertainty regarding the ongoing process of negotiation, may adversely affect consumer confidence and the level of consumer purchases of discretionary items, including our Service. Any such effect could adversely affect our business, operating results, and financial condition.

We are a multinational company that faces complex taxation regimes in various jurisdictions. Audits, investigations, and tax proceedings could have a material adverse effect on our business, operating results, and financial condition.

We are subject to income and non-income taxes in numerous jurisdictions. Income tax accounting often involves complex issues, and judgment is required in determining our worldwide provision for income taxes and other tax liabilities. In particular, most of the jurisdictions in which we conduct business have detailed transfer pricing rules, which require that all transactions with non-resident related parties be priced using arm's length pricing principles within the meaning of such rules. We are subject to ongoing tax audits in several jurisdictions, and most of such audits involve transfer pricing issues. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax reserves as well as tax liabilities going forward. We have initiated and are in

negotiations of an Advance Pricing Agreement (“APA”) between Sweden and the United States governments for tax years 2014 through 2020 covering various transfer pricing matters. These transfer pricing matters may be significant to our consolidated financial statements. In addition, the application of withholding tax, value added tax, goods and services tax, sales taxes and other non-income taxes is not always clear and we may be subject to tax audits relating to such withholding or non-income taxes. We believe that our tax positions are reasonable and our tax reserves are adequate to cover any potential liability. However, tax authorities in certain jurisdictions may disagree with our position, including the propriety of our related party arm’s length transfer pricing policies and the tax treatment of corresponding expenses and income. If any of these tax authorities were successful in challenging our positions, we may be liable for additional income tax and penalties and interest related thereto in excess of any reserves established therefor, which may have a significant impact on our results and operations and future cash flow.

We may not be able to utilize all, or any, of our net operating loss carry-forwards.

We have significant net operating loss carry-forwards in Sweden and the United States. As of December 31, 2019, we had net operating loss carry-forwards of €5 million in Luxembourg, €723 million in Sweden, €461 million in the United States relating to federal taxes, and €309 million in the United States relating to state taxes. In certain jurisdictions, if we are unable to earn sufficient income or profits to utilize such carry-forwards before they expire, they will no longer be available to offset future income or profits.

In Sweden, utilization of these net operating loss carry-forwards may be subject to a substantial annual limitation or elimination in full or part if there is an ownership or control change within the meaning of Chapter 40, paragraphs 10-14 of the Swedish Income Tax Act (the “Swedish Income Tax Act”). In general, an ownership or control change, as defined by the Swedish Income Tax Act, results from a transaction or series of transactions over a five-year period resulting in an ownership or control change of a company by certain categories or individuals, businesses or organizations. The treatment of our issuance of the beneficiary certificates in February 2018 is unclear under the Swedish Income Tax Act and there is a risk that such issuance may have constituted an ownership or control change, as defined by the Swedish Income Tax Act. If our issuance of the beneficiary certificates were to be deemed to have constituted an ownership or control change, our ability to use our net operating loss carry-forwards may be limited or eliminated.

In addition, in the United States, utilization of these net operating loss carry-forwards may be subject to a substantial annual limitation if there is an ownership change within the meaning of Section 382 of the Internal Revenue Code (“Section 382”). In general, an ownership change, as defined by Section 382, results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50% of the outstanding stock of a company by certain stockholders or public groups. Since our formation, we have raised capital through the issuance of capital stock on several occasions, and we may continue to do so in the future, which, combined with current or future shareholders’ disposition of ordinary shares, may have resulted in such an ownership change. Such an ownership change may limit the amount of net operating loss carry-forwards that can be utilized to offset future taxable income.

If the fair market value of our ordinary shares fluctuates unpredictably and significantly on a quarterly basis, the social costs we accrue for share-based compensation may fluctuate unpredictably and significantly, which could result in our failing to meet our expectations or investor expectations for quarterly financial performance. This could negatively impact investor sentiment for the Company, and as a result, adversely impact the price of our ordinary shares.

Social costs are payroll taxes associated with employee salaries and benefits, including share-based compensation that we are subject to in various countries in which we operate. This is not a withholding tax. For the year ended December 31, 2019, we recorded a social cost expense related to share-based compensation of €37 million compared to a €30 million expense for the year ended December 31, 2018.

When the fair market value of our ordinary shares increases on a quarter-to-quarter basis, the accrued expense for social costs will increase, and when the fair market value of ordinary shares falls, the accrued expense will become a reduction in social costs expense, all other things being equal, including the number of vested stock options and exercise price remaining constant. The fair market value of our ordinary shares has been and will likely continue to be volatile. See “—Risks Related to Owning Our Ordinary Shares—The trading price of our ordinary shares has been and will likely continue to be volatile.” As a result, the accrued expense for social costs may fluctuate unpredictably and significantly from quarter to quarter, which could result in our failing to meet our expectations or investor expectations for quarterly financial performance. This could negatively impact investor sentiment for the company, and as a result, the price for our ordinary shares.

Additionally, approximately 31% of our employees are in Sweden. With respect to our employees in Sweden, we are required to pay a 31.42% tax to the Swedish government on the profit an employee realizes on the exercise of our stock options or the vesting of our restricted stock units (“RSUs”). They accounted for a total of 1,849,493 in vested options as of December 31, 2019 compared to a total of 1,618,539 in vested options as of December 31, 2018. We cannot accurately predict how many of their vested options will

remain outstanding. As a result, the cash payments to the Swedish government upon the exercise of vested stock options may vary significantly from quarter to quarter.

Changes to tax laws in any of the jurisdictions in which we operate or plan to operate in the future could have a material adverse effect on our business, results of operations, and financial condition. New proposals on taxing digital companies could have an adverse effect on our business.

We are a multinational company that is subject to complex taxation regimes in numerous jurisdictions. Our future effective tax rates could be affected by changes in tax laws or their interpretation in any of those jurisdictions. Tax laws, including tax rates, in the jurisdictions in which we operate may change as a result of macroeconomic or other factors outside of our control. For example, various governments and organizations such as the EU and Organization for Economic Co-operation and Development are increasingly focused on tax reform and other legislative or regulatory action to increase tax revenue, such as the imposition of taxes in connection with certain digital services. In particular, some EU member states have enacted or currently have pending legislation for taxes on certain digital services, including the sale of online advertising, and on companies with a significant digital presence. Other countries have enacted or are considering extraterritorial VAT legislation.

The recently enacted U.S. tax reform (informally titled the “Tax Cuts and Jobs Act”) introduced a number of significant changes to the U.S. federal income tax rules. Among other things, the Tax Cuts and Jobs Act reduced the marginal U.S. corporate income tax rate from 35% to 21%, limited the deduction for net interest expense, shifted the United States toward a more territorial tax system, and imposed new taxes to combat erosion of the U.S. federal income tax base. Our financial statements for the year ended December 31, 2019 reflect the effects of the Tax Cuts and Jobs Act based on current guidance. However, there are uncertainties and ambiguities in the application of certain provisions of the Tax Cuts and Jobs Act, and as a result we made certain judgments and assumptions in the interpretation thereof. The U.S. Treasury Department and the Internal Revenue Service have issued certain guidance, and may issue further guidance on how the provisions of the Tax Cuts and Jobs Act will be applied or otherwise administered that differs from our current interpretation. In addition, the Tax Cuts and Jobs Act could be subject to potential amendments and technical corrections, any of which could materially lessen or increase certain adverse impacts of the legislation on us. We may make adjustments to the provisional amounts to reflect such guidance as well as amendments.

Changes in tax laws, treaties, or regulations or their interpretation or enforcement are unpredictable. Any of these occurrences could have a material adverse effect on our results of operations and financial condition.

Risks Related to Owning Our Ordinary Shares

The trading price of our ordinary shares has been and will likely continue to be volatile.

The trading price of our ordinary shares has been and is likely to continue to be volatile. In 2019, the trading price of our ordinary shares has ranged from \$108.59 to \$161.38. The market price of our ordinary shares may fluctuate or decline significantly in response to numerous factors, many of which are beyond our control, including:

- the number of our ordinary shares publicly owned and available for trading;
- quarterly variations in our results of operations or those of our competitors;
- the accuracy of our financial guidance or projections;
- our actual or anticipated operating performance and the operating performance of similar companies in the internet, radio, or digital media spaces;
- our announcements or our competitors’ announcements regarding new services, enhancements, significant contracts, acquisitions, or strategic investments;
- general economic conditions and their impact on advertising spending;
- the overall performance of the equity markets;
- threatened or actual litigation;
- changes in laws or regulations relating to our Service;
- any major change in our board of directors or management;

- publication of research reports about us or our industry or changes in recommendations or withdrawal of research coverage by securities analysts; and
- sales or expected sales, or repurchases or expected repurchases, of our ordinary shares by us, and our officers, directors, and significant shareholders.

In addition, the stock market in general, and the market for technology companies in particular, have experienced extreme price and volume fluctuations that often have been unrelated or disproportionate to the operating performance of those companies. Price volatility over a given period may cause the average price at which the Company repurchases its ordinary shares to exceed the trading price at a given point in time. Securities class action litigation has often been instituted against companies following periods of volatility in the overall market and in the market price of a company's securities. Such litigation, if instituted against us, could result in very substantial costs, divert our management's attention and resources and harm our business, operating results, and financial condition.

Because of their significant ownership of our ordinary shares and beneficiary certificates, our founders have substantial control over our business, and their interests may differ from our interests or those of our other shareholders. Sales of substantial amounts of our ordinary shares in the public markets by our founders or other shareholders, or the perception that such sales might occur, could reduce the price that our ordinary shares might otherwise attain and may dilute your voting power and your ownership interest in us.

As of December 31, 2019, our founders, Daniel Ek and Martin Lorentzon, beneficially owned or controlled, directly or indirectly, ordinary shares and beneficiary certificates representing 33.6% and 43.8% of the combined voting power of all of our outstanding voting securities, respectively (or 77.4% in the aggregate). See "Item 7.A. Major Shareholders." Additionally, our shareholders have authorized the issuance of up to 1,400,000,000 beneficiary certificates to shareholders of the Company. We may issue additional beneficiary certificates under the total authorized amount at the discretion of our board of directors, of which our founders are members. Pursuant to our articles of association, the beneficiary certificates may be issued at a ratio of between one and 20 beneficiary certificates per ordinary share as determined by our board of directors or its delegate at the time of issuance. For example, in the future, we may issue to Mr. Ek up to 20 beneficiary certificates for each ordinary share he receives upon the exercise of outstanding warrants, of which he currently holds 2,400,000 in the aggregate.

As a result of this ownership or control of our voting securities, if our founders act together, they will have control over the outcome of substantially all matters submitted to our shareholders for approval, including the election of directors. This may delay or prevent an acquisition or cause the trading price of our ordinary shares to decline. Our founders may have interests different from yours. Therefore, the concentration of voting power among our founders may have an adverse effect on the price of our ordinary shares.

Sales of substantial amounts of our ordinary shares in the public market by our founders, affiliates, or non-affiliates, or the perception that such sales could occur, could adversely affect the trading price of our ordinary shares and may make it more difficult for you to sell your ordinary shares at a time and price that you deem appropriate.

Although we currently are not considered to be a "controlled company" under the NYSE corporate governance rules, we may in the future become a controlled company due to the concentration of voting power among our founders resulting from the issuance of beneficiary certificates.

A "controlled company" pursuant to NYSE corporate governance rules is a company of which more than 50% of the voting power is held by an individual, group, or another company. In the event we no longer qualify as a foreign private issuer, we may in the future be able to rely on the "controlled company" exemptions under the NYSE corporate governance rules due to the concentration of voting power among our founders and the ability of our founders to act as a group. If we were a controlled company, we would be eligible to, and, in the event we no longer qualify as a foreign private issuer, could elect not to comply with certain of the NYSE corporate governance standards. Such standards include the requirement that a majority of directors on our board of directors are independent directors and the requirement that our remuneration committee and nominating and corporate governance committee consist entirely of independent directors. In such a case, our shareholders would not have the same protection afforded to shareholders of companies that are subject to all of the NYSE corporate governance standards, and the ability of our independent directors to influence our business policies and affairs may be reduced.

If securities or industry analysts publish inaccurate or unfavorable research about our business or cease publishing research about our business, our share price and trading volume could decline.

The trading market for our ordinary shares will be influenced by the research and reports that securities or industry analysts publish about our Company or us. If one or more of the analysts who cover us downgrade our ordinary shares or publish inaccurate or unfavorable research about our Company, our ordinary share price would likely decline. Further, if one or more of these analysts cease coverage of our Company or fail to publish reports on us regularly, demand for our ordinary shares could decrease, which might cause our ordinary share price and trading volume to decline.

The requirements of being a public company may strain our resources and divert management's attention.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Sarbanes-Oxley Act, the listing requirements of the NYSE, and other applicable securities rules and regulations. Compliance with these rules and regulations incurs substantial legal and financial compliance costs, makes some activities more difficult, time-consuming, or costly, and places increased demand on our systems and resources. The Exchange Act requires, among other things, that we file annual and current reports with respect to our business and operating results. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain disclosure controls and procedures and internal control over financial reporting that meet this standard, significant resources and management oversight are required. As a result, management's attention may be diverted from other business concerns, which could harm our business and operating results.

Provisions in our articles of association, the issuance of beneficiary certificates, and the existence of certain voting agreements may delay or prevent our acquisition by a third party.

Our articles of association contain provisions that may make it more difficult or expensive for a third party to acquire control of us without the approval of our board of directors and, if required, our shareholders. These provisions also may delay, prevent, or deter a merger, acquisition, tender offer, proxy contest, or other transaction that might otherwise result in our shareholders receiving a premium over the market price for their ordinary shares. The provisions include, among others, the authorization granted by the general meeting of shareholders to our board of directors to issue ordinary shares within the limits of the authorized share capital at such times and on such terms as our board of directors may decide for a maximum period of five years after the date of publication in the Luxembourg official gazette (*Recueil électronique des Sociétés et Associations*, as applicable) of the minutes of the relevant general meeting approving such authorization. The general meeting may amend, renew, or extend such authorized share capital and such authorization to the board of directors to issue ordinary shares.

The provisions of our articles of association could discourage potential takeover attempts and reduce the price that investors might be willing to pay for our ordinary shares in the future, which could reduce the trading price of our ordinary shares.

Additionally, the issuance of beneficiary certificates also may make it more difficult or expensive for a third party to acquire control of us without the approval of our founders. See "—Because of their significant ownership of our ordinary shares and beneficiary certificates, our founders have substantial control over our business, and their interests may differ from our interests or those of our other shareholders. Sales of substantial amounts of our ordinary shares in the public markets by our founders or other shareholders, or the perception that such sales might occur, could reduce the price that our ordinary shares might otherwise attain and may dilute your voting power and your ownership interest in us." and "—The issuance of beneficiary certificates to certain shareholders will limit your voting power and will limit your ability to influence the composition of the board of directors, strategy, or performance of the business. We cannot predict the impact that beneficiary certificates may have on our stock price."

We do not expect to pay cash dividends in the foreseeable future.

We have never declared or paid any cash dividends on our share capital. We currently intend to retain any future earnings for working capital and general corporate purposes and do not expect to pay dividends or other distributions on our ordinary shares in the foreseeable future. As a result, you may only receive a return on your investment in our ordinary shares if you sell some or all of your ordinary shares after the trading price of our ordinary shares increases. You may not receive a gain on your investment when you sell your ordinary shares and you may lose the entire amount of the investment.

Moreover, we are a holding company and have no material assets other than our direct and indirect ownership of shares in our subsidiaries. Our ability to pay any future dividends is subject to restrictions on the ability of our subsidiaries to pay dividends or make distributions to us, including the laws of the relevant jurisdiction in which the subsidiaries are organized or located, as well as any restrictions in the future indebtedness of our subsidiaries or on our ability to receive dividends or distributions from our subsidiaries. Since we are expected to rely primarily on dividends from our direct and indirect subsidiaries to fund our financial and

other obligations, restrictions on our ability to receive such funds may adversely impact our ability to fund our financial and other obligations.

The issuance of beneficiary certificates to certain shareholders will limit your voting power and will limit your ability to influence the composition of the board of directors, strategy, or performance of the business. We cannot predict the impact that beneficiary certificates may have on our stock price.

Our shareholders have authorized the issuance of up to 1,400,000,000 beneficiary certificates to shareholders of the Company without reserving to our existing shareholders a preemptive right to subscribe for the beneficiary certificates issued in the future. Entities beneficially owned by our founders, Daniel Ek and Martin Lorentzon, collectively have 378,201,910 beneficiary certificates outstanding as of December 31, 2019. We may issue additional beneficiary certificates under the total authorized amount at the discretion of our board of directors, of which our founders are members. Pursuant to our articles of association, our beneficiary certificates may be issued at a ratio of between one and 20 beneficiary certificates per ordinary share as determined by our board of directors or its delegate at the time of issuance. For example, in the future, we may issue to Mr. Ek up to 20 beneficiary certificates for each ordinary share he receives upon the exercise of outstanding warrants, of which he currently holds 2,400,000. See “Item 6.B. Compensation—Compensation Discussion & Analysis—Warrants.” Each beneficiary certificate entitles its holder to one vote. The beneficiary certificates carry no economic rights and are issued to provide the holders of such beneficiary certificates additional voting rights. The beneficiary certificates, subject to certain exceptions, may not be transferred and will automatically be canceled for no consideration in the case of sale or transfer of the ordinary share to which they are linked. As a result, the issuance of the beneficiary certificates and the voting power that they provide to the shareholders receiving those beneficiary certificates will limit the voting power of minority shareholders and the ability of minority shareholders to influence the composition of the board of directors, strategy, or performance of our business. See “—Because of their significant ownership of our ordinary shares and beneficiary certificates, our founders have substantial control over our business, and their interests may differ from our interests or those of our other shareholders. Sales of substantial amounts of our ordinary shares in the public markets by our founders or other shareholders, or the perception that such sales might occur, could reduce the price that our ordinary shares might otherwise attain and may dilute your voting power and your ownership interest in us,” “Item 7.A. Major Shareholders”, and “Item 10.B. Memorandum and Articles of Association—Voting Rights.”

Finally, we cannot predict whether the issuance of additional beneficiary certificates will result in a lower or more volatile trading price of our ordinary shares or result in adverse publicity or other adverse consequences. For example, FTSE Russell requires new constituents of its indexes to have greater than five percent of the company’s voting rights in the hands of public shareholders, and S&P Dow Jones will not admit companies with multiple-class share structures to certain of its indexes. While we do not have a multiple-class share structure, we cannot predict if we would be excluded from these indexes as a result of the issuance of beneficiary certificates and we cannot assure you that other stock indexes will not take similar actions. Given the sustained flow of investment funds into passive strategies that seek to track certain indexes, exclusion from stock indexes would likely preclude investment by many of these funds and could make our ordinary shares less attractive to other investors. As a result, the trading price of our ordinary shares could be adversely affected.

We may be classified as a passive foreign investment company, which could result in adverse U.S. federal income tax consequences to U.S. Holders of our ordinary shares.

We would be classified as a passive foreign investment company (“PFIC”) for any taxable year if, after the application of certain look-through rules, either: (i) 75% or more of our gross income for such year is “passive income” (as defined in the relevant provisions of the Internal Revenue Code of 1986, as amended), or (ii) 50% or more of the value of our assets (determined on the basis of a quarterly average) during such year is attributable to assets that produce or are held for the production of passive income. Based on the trading price of our ordinary shares and the composition of our income, assets and operations, we do not believe that we were a PFIC for U.S. federal income tax purposes for the taxable year ending on December 31, 2019, nor that we will be a PFIC in the foreseeable future. However, this is a factual determination that must be made annually after the close of each taxable year. Moreover, the value of our assets for purposes of the PFIC determination may be determined by reference to the trading price of our ordinary shares, which could fluctuate significantly. Therefore, there can be no assurance that we will not be classified as a PFIC in the future. Certain adverse U.S. federal income tax consequences could apply to a U.S. Holder if we are treated as a PFIC for any taxable year during which such U.S. Holder holds our ordinary shares. Accordingly, each holder of our ordinary shares should consult such holder’s tax advisor as to the potential effects of the PFIC rules.

Risks Related to Investment in a Luxembourg Company and Our Status as a Foreign Private Issuer

As a foreign private issuer, we are exempt from a number of U.S. securities laws and rules promulgated thereunder and are permitted to publicly disclose less information than U.S. companies must. This may limit the information available to holders of the ordinary shares.

We currently qualify as a foreign private issuer, as defined in the SEC's rules and regulations, and, consequently, we are not subject to all of the disclosure requirements applicable to companies organized within the United States. For example, we are exempt from certain rules under the Exchange Act, that regulate disclosure obligations and procedural requirements related to the solicitation of proxies, consents or authorizations applicable to a security registered under the Exchange Act. In addition, our officers and directors are exempt from the reporting and "short-swing" profit recovery provisions of Section 16 of the Exchange Act and related rules with respect to their purchases and sales of our securities. For example, some of our key executives may sell a significant amount of ordinary shares and such sales will not be required to be disclosed as promptly as companies organized within the United States would have to disclose. Accordingly, once such sales are eventually disclosed, our ordinary share price may decline significantly. Moreover, we are not required to file periodic reports and financial statements with the SEC as frequently or as promptly as U.S. public companies. We are also not subject to Regulation FD under the Exchange Act, which would prohibit us from selectively disclosing material nonpublic information to certain persons without concurrently making a widespread public disclosure of such information. Accordingly, there may be less publicly available information concerning our company than there is for U.S. public companies.

As a foreign private issuer, we are required to file an annual report on Form 20-F within four months of the close of each fiscal year ended December 31 and furnish reports on Form 6-K relating to certain material events promptly after we publicly announce these events. However, because of the above exemptions for foreign private issuers, which we intend to rely on, our shareholders will not always be afforded the same information generally available to investors holding shares in public companies that are not foreign private issuers.

We may lose our foreign private issuer status in the future, which could result in significant additional costs and expenses. This would make us subject to U.S. GAAP reporting requirements, which may be difficult for us to comply with.

As a foreign private issuer, we are not required to comply with all of the periodic disclosure and current reporting requirements of the Exchange Act and related rules and regulations. Under those rules, the determination of foreign private issuer status is made annually on the last business day of an issuer's most recently completed second fiscal quarter, and, accordingly, the next determination will be made with respect to us on June 30, 2020.

In the future, we would lose our foreign private issuer status if a majority of our shareholders, directors or management are U.S. citizens or residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. Although we intend to follow certain practices that are consistent with U.S. regulatory provisions applicable to U.S. companies, such as providing quarterly financial information to the SEC and providing comprehensive executive compensation disclosure substantially consistent with the disclosure requirements for domestic issuers, our loss of foreign private issuer status would make such provisions mandatory. The regulatory and compliance costs to us under U.S. securities laws as a U.S. domestic issuer may be significantly higher. If we are not a foreign private issuer, we will be required to file periodic reports and prospectuses on U.S. domestic issuer forms with the SEC, which are in general more detailed and extensive than the forms available to a foreign private issuer. For example, we would become subject to Regulation FD, aimed at preventing issuers from making selective disclosures of material information. We may also be required to modify certain of our policies to comply with good governance practices associated with U.S. domestic issuers. Such conversion and modifications will involve additional costs. In addition, we may lose our ability to rely upon exemptions from certain corporate governance requirements of the NYSE that are available to foreign private issuers. For example, the NYSE's corporate governance rules require listed companies to have, among other things, a majority of independent board members and independent director oversight of executive compensation, nomination of directors, and corporate governance matters. As a foreign private issuer, we are permitted to follow home country practice in lieu of the above requirements. As long as we rely on the foreign private issuer exemption to certain of the NYSE corporate governance standards, a majority of the directors on our board of directors are not required to be independent directors, our remuneration committee is not required to be comprised entirely of independent directors, and we will not be required to have a nominating and corporate governance committee. Also, we would be required to change our basis of accounting from IFRS as issued by the IASB to U.S. generally accepted accounting principles ("U.S. GAAP"), which may be difficult and costly for us to comply with. If we lose our foreign private issuer status and fail to comply with U.S. securities laws applicable to U.S. domestic issuers, we may have to de-list from the NYSE and could be subject to investigation by the SEC, NYSE, and other regulators, among other materially adverse consequences.

The rights of our shareholders may differ from the rights they would have as shareholders of a U.S. corporation, which could adversely impact trading in our ordinary shares and our ability to conduct equity financings.

Our corporate affairs are governed by our articles of association and the laws of Luxembourg, including the Luxembourg Company Law (*loi du 10 août 1915 concernant les sociétés commerciales, telle qu'elle a été modifiée*). The rights of our shareholders and the responsibilities of our directors and officers under Luxembourg law are different from those applicable to a corporation incorporated in the United States. For example, under Delaware law, the board of directors of a Delaware corporation bears the ultimate responsibility for managing the business and affairs of a corporation. In discharging this function, directors of a Delaware corporation owe fiduciary duties of care and loyalty to the corporation and its shareholders. Luxembourg law imposes a duty on directors of a Luxembourg company to: (i) act in good faith with a view to the best interests of a company; and (ii) exercise the care, diligence, and skill that a reasonably prudent person would exercise in a similar position and under comparable circumstances. Additionally, under Delaware law, a shareholder may bring a derivative action on behalf of a company to enforce a company's rights. Under Luxembourg law, the board of directors has sole authority to decide whether to initiate legal action to enforce a company's rights (other than, in certain circumstances, an action against board members). See "Item 10.B. Memorandum and Articles of Association—Differences in Corporate Law" for an additional explanation of the differences. Further, under Luxembourg law there may be less publicly available information about us than is regularly published by or about U.S. issuers. In addition, Luxembourg law governing the securities of Luxembourg companies may not be as extensive as those in effect in the United States, and Luxembourg law and regulations in respect of corporate governance matters might not be as protective of minority shareholders as state corporation laws in the United States. Therefore, our shareholders may have more difficulty in protecting their interests in connection with actions taken by our directors and officers or our principal shareholders than they would as shareholders of a corporation incorporated in the United States. As a result of these differences, our shareholders may have more difficulty protecting their interests than they would as shareholders of a U.S. issuer.

We are organized under the laws of Luxembourg and a substantial amount of our assets are not located in the United States. It may be difficult for you to obtain or enforce judgments or bring original actions against us or the members of our board of directors in the United States.

We are organized under the laws of Luxembourg. In addition, a substantial amount of our assets are located outside the United States. Furthermore, many of the members of our board of directors and officers reside outside the United States and a substantial portion of their assets are located outside the United States. Investors may not be able to effect service of process within the United States upon us or these persons or enforce judgments obtained against us or these persons in U.S. courts, including judgments in actions predicated upon the civil liability provisions of the U.S. federal securities laws. Likewise, it may also be difficult for an investor to enforce in U.S. courts judgments obtained against us or these persons in courts located in jurisdictions outside the United States, including judgments predicated upon the civil liability provisions of the U.S. federal securities laws. Awards of punitive damages in actions brought in the United States or elsewhere are generally not enforceable in Luxembourg.

As there is no treaty in force on the reciprocal recognition and enforcement of judgments in civil and commercial matters between the United States and Luxembourg, courts in Luxembourg will not automatically recognize and enforce a final judgment rendered by a U.S. court. A valid judgment obtained from a court of competent jurisdiction in the United States may be entered and enforced through a court of competent jurisdiction in Luxembourg, subject to compliance with the enforcement procedures (*exequatur*). The enforceability in Luxembourg courts of judgments rendered by U.S. courts will be subject, prior to any enforcement in Luxembourg, to the procedure and the conditions set forth in the Luxembourg procedural code, which conditions may include the following as of the date of this prospectus (which may change):

- the judgment of the U.S. court is final and enforceable (*exécutoire*) in the United States;
- the U.S. court had jurisdiction over the subject matter leading to the judgment (that is, its jurisdiction was in compliance both with Luxembourg private international law rules and with the applicable domestic U.S. federal or state jurisdictional rules);
- the U.S. court applied to the dispute the substantive law that would have been applied by Luxembourg courts (based on recent case law and legal doctrine, it is not certain that this condition would still be required for an *exequatur* to be granted by a Luxembourg court);
- the judgment was granted following proceedings where the counterparty had the opportunity to appear and, if it appeared, to present a defense, and the decision of the foreign court must not have been obtained by fraud, but in compliance with the rights of the defendant;
- the U.S. court acted in accordance with its own procedural laws; and
- the decisions and the considerations of the U.S. court must not be contrary to Luxembourg international public policy rules or have been given in proceedings of a tax or criminal nature or rendered subsequent to an evasion of Luxembourg

law (*fraude à la loi*). Awards of damages made under civil liabilities provisions of the U.S. federal securities laws, or other laws, which are classified by Luxembourg courts as being of a penal or punitive nature (for example, fines or punitive damages), might not be recognized by Luxembourg courts. Ordinarily, an award of monetary damages would not be considered as a penalty, but if the monetary damages include punitive damages, such punitive damages may be considered a penalty.

In addition, actions brought in a Luxembourg court against us, the members of our board of directors, or our officers to enforce liabilities based on U.S. federal securities laws may be subject to certain restrictions. In particular, Luxembourg courts generally do not award punitive damages. Litigation in Luxembourg also is subject to rules of procedure that differ from the U.S. rules, including, with respect to the taking and admissibility of evidence, the conduct of the proceedings and the allocation of costs. Proceedings in Luxembourg would have to be conducted in the French or German language, and all documents submitted to the court would, in principle, have to be translated into French or German. For these reasons, it may be difficult for a U.S. investor to bring an original action in a Luxembourg court predicated upon the civil liability provisions of the U.S. federal securities laws against us, the members of our board of directors, or our officers. In addition, even if a judgment against the Company, the non-U.S. members of our board of directors, or our officers based on the civil liability provisions of the U.S. federal securities laws is obtained, a U.S. investor may not be able to enforce it in U.S. or Luxembourg courts.

Our articles of association provide that directors and officers, past and present, are entitled to indemnification from us to the fullest extent permitted by Luxembourg law against all liability and expenses reasonably incurred or paid by him or her in connection with any claim, action, suit, or proceeding in which he or she would be involved by virtue of his or her being or having been a director or officer and against amounts paid or incurred by him or her in the settlement thereof. However, no indemnification will be provided against any liability to our directors, officers, or shareholders (i) by reason of willful misfeasance, bad faith, gross negligence, or reckless disregard of the duties of a director or officer, (ii) with respect to any matter as to which any director or officer shall have been finally adjudicated to have acted in bad faith and not in our interest, or (iii) in the event of a settlement, unless approved by a court or the board of directors. The rights to and obligations of indemnification among or between us and any of our current or former directors and officers are generally governed by the laws of Luxembourg and subject to the jurisdiction of the Luxembourg courts, unless such rights or obligations do not relate to or arise out of such persons' capacities listed above. Although there is doubt as to whether U.S. courts would enforce this indemnification provision in an action brought in the United States under U.S. federal or state securities laws, this provision could make it more difficult to obtain judgments outside Luxembourg or from non-Luxembourg jurisdictions that would apply Luxembourg law against our assets in Luxembourg.

Luxembourg and European insolvency and bankruptcy laws are substantially different from U.S. insolvency laws and may offer our shareholders less protection than they would have under U.S. insolvency and bankruptcy laws.

As a company organized under the laws of Luxembourg and with its registered office in Luxembourg, we are subject to Luxembourg insolvency and bankruptcy laws in the event any insolvency proceedings are initiated against us including, among other things, Council and European Parliament Regulation (EU) 2015/848 of 20 May 2015 on insolvency proceedings (recast). Should courts in another European country determine that the insolvency and bankruptcy laws of that country apply to us in accordance with and subject to such EU regulations, the courts in that country could have jurisdiction over the insolvency proceedings initiated against us. Insolvency and bankruptcy laws in Luxembourg or the relevant other European country, if any, may offer our shareholders less protection than they would have under U.S. insolvency and bankruptcy laws and make it more difficult for them to recover the amount they could expect to recover in a liquidation under U.S. insolvency and bankruptcy laws.

If a United States person is treated as owning at least 10% of our ordinary shares, such holder may be subject to adverse U.S. federal income tax consequences.

If a United States person is treated as owning (directly, indirectly, or constructively) at least 10% of the value or voting power of our ordinary shares, such person may be treated as a “United States shareholder” with respect to each “controlled foreign corporation” in our group (if any). Because our group includes one or more U.S. subsidiaries, certain of our non-U.S. subsidiaries could be treated as controlled foreign corporations (regardless of whether or not we are treated as a controlled foreign corporation). A United States shareholder of a controlled foreign corporation may be required to report annually and include in its U.S. taxable income its pro rata share of “Subpart F income,” “global intangible low-taxed income,” and investments in U.S. property by controlled foreign corporations, regardless of whether we make any distributions. An individual that is a United States shareholder with respect to a controlled foreign corporation generally would not be allowed certain tax deductions or foreign tax credits that would be allowed to a United States shareholder that is a U.S. corporation. Failure to comply with these reporting obligations may subject a United States shareholder to significant monetary penalties and may prevent the statute of limitations with respect to such shareholder’s U.S. federal income tax return for the year for which reporting was due from starting. We cannot provide any assurances that we will assist investors in determining whether any of our non-U.S. subsidiaries is treated as a controlled foreign corporation or whether any investor is treated as a United States shareholder with respect to any such controlled foreign corporation or furnish to any United States shareholders information that may be necessary to comply with the aforementioned reporting and tax paying obligations. A United States investor should consult its advisors regarding the potential application of these rules to an investment in our ordinary shares.

Item 4. Information on the Company

A. History and Development of the Company

We are a Luxembourg public limited liability company (*société anonyme*), which means that shareholders’ liability is limited to their contributions to the company. The shares forming the share capital of a Luxembourg public limited liability company (*société anonyme*) may be publicly traded and registered on a stock exchange. Our legal name is “Spotify Technology S.A.” and our commercial name is “Spotify.” We were incorporated on December 27, 2006 as a Luxembourg private limited liability company (*société à responsabilité limitée*) and were transformed, on March 20, 2009, into a Luxembourg public limited liability company (*société anonyme*). The principal legislation under which we operate, and under which our ordinary share capital has been created, is the law of 10 August 1915 on commercial companies, as amended, and the law of 19 December 2002 on the register of commerce and companies and the accounting and annual accounts of undertakings and the regulations, as amended, made thereunder.

We are registered with the Luxembourg Trade and Companies’ Register under number B.123.052. Our registered office is located at 42-44, avenue de la Gare L-1610 Luxembourg, Grand Duchy of Luxembourg, and our principal operational office is located at Regeringsgatan 19, 111 53 Stockholm, Sweden. Our agent for U.S. federal securities law purposes is Horacio Gutierrez, Head of Global Affairs and Chief Legal Officer, 150 Greenwich Street, 63rd Floor, New York, New York 10007.

On April 3, 2018, we completed a direct listing of the Company’s ordinary shares on the NYSE.

On February 14, 2019, we acquired Anchor FM Inc. (“Anchor”), a software company that enables users to create and distribute their own podcasts, for a total purchase consideration of €136 million. The acquisition allows us to leverage Anchor’s creator-focused platform to accelerate the Group’s path to becoming the world’s leading audio platform.

On February 15, 2019, we acquired Gimlet Media Inc. (“Gimlet”), an independent producer of podcast content, for a total purchase consideration of €172 million. The acquisition allows us to leverage Gimlet’s in-depth knowledge of original content production and podcast monetization.

On April 1, 2019, we acquired Cutler Media, LLC (“Parcast”), a premier storytelling podcast studio, for a total purchase consideration of €49 million. The acquisition allows us to bolster its content portfolio and utilize Parcast’s writers, producers, and researchers in the production of high-quality content.

See Note 5 to our consolidated financial statements included elsewhere in this report.

B. Business Overview

Our mission is to unlock the potential of human creativity by giving a million creative artists the opportunity to live off their art and billions of fans the opportunity to enjoy and be inspired by these creators.

We are the most popular global audio streaming subscription service. With a presence in 79 countries and territories and growing, our platform includes 271 million MAUs and 124 million Premium Subscribers as of December 31, 2019.

Our users are highly engaged. We currently monetize our Service through both subscriptions and advertising. Our Premium Subscribers grew 29% year-over-year as of December 31, 2019 to 124 million. Our 271 million MAUs grew 31% year-over-year as of December 31, 2019. The Premium Service and Ad-Supported Service live independently, but thrive together. Our Ad-Supported Service serves as a funnel, driving a significant portion of our total gross added Premium Subscribers. With a 30% increase in revenue from our Ad-Supported Service from 2017 to 2018 and a 25% increase in revenue from our Ad-Supported Service from 2018 to 2019, we believe our Ad-Supported Service is a strong and viable stand-alone product with considerable long-term opportunity for growth in Ad-Supported Users and revenue. However, we face intense competition in growing both our Ad-Supported Users and Premium Subscribers, as well as in keeping our users highly engaged. If user engagement declines or if we fail to continue to grow our Ad-Supported User base or Premium Subscriber base, our revenue growth will be negatively impacted. See “Risk Factors—Risks Related to Our Business—If our efforts to attract prospective users and to retain existing users are not successful, our growth prospects and revenue will be adversely affected.”

For the years ended December 31, 2019, 2018, and 2017, we generated €6,764 million, €5,259 million, and €4,090 million in revenue, respectively, representing a CAGR of 29%. For the years ended December 31, 2019, 2018, and 2017, we incurred net losses of €186 million, €78 million, and €1,235 million, respectively. For the years ended December 31, 2019, 2018, and 2017, our EBITDA was €14 million, €(11) million, and €(324) million, respectively. For the years ended December 31, 2019, 2018, and 2017, our net cash flow from operating activities was €573 million, €344 million, and €179 million, respectively. For the years ended December 31, 2019, 2018, and 2017, our Free Cash Flow was €440 million, €209 million, and €109 million, respectively. EBITDA and Free Cash Flow are non-IFRS financial measures. For a discussion of EBITDA and Free Cash Flow and a reconciliation of each to their most closely comparable IFRS measures, see “Item 3.A. Selected Financial Data.”

Music Industry Returns to Growth Led by Streaming

Global recorded music industry revenues grew 10% to \$19.1 billion in 2018 following on growth of 8% in 2017, 9% in 2016, and 4% in 2015. This marks the fourth consecutive year of global growth, and one of the highest rates of growth in more than 20 years, according to management estimates and industry reports.

Through December 31, 2019, we have paid more than €15 billion in royalties to artists, music labels, and publishers since our launch. In 2019, our expenses for rights holders grew by 30% compared to the prior year, making us one of the largest engines for revenue growth to artists and labels in the music industry.

Spotify is the Most Popular Global Audio Streaming Subscription Service

Spotify has transformed the way people access and enjoy music and podcasts. Today, millions of people around the world have access to over 50 million tracks, including 700,000 podcast titles, through Spotify whenever and wherever they want.

We are transforming the music industry by allowing users to move from a “transaction-based” experience of buying and owning music to an “access-based” model which allows users to stream music on demand. In contrast, traditional radio relies on a linear distribution model in which stations and channels are programmed to deliver a limited song selection with little freedom of choice.

We are investing in podcasts and other forms of alternative and spoken word content to complement the music library available through our platform. More than 16% of our Monthly Active Users as of December 31, 2019 have consumed this kind of content. We believe offering a more diverse selection of content will lead to a more enriching experience and higher user engagement.

Spotify is more than an audio streaming service. We are in the discovery business. Every day, fans from around the world trust our brand to guide them to music and entertainment that they would never have discovered on their own. If discovery drives delight, and delight drives engagement, and engagement drives discovery, we believe Spotify wins and so do our users. Our brand reflects culture—and occasionally creates it—by turning vast and intriguing listening data into compelling stories that remind people of the role music plays in their lives and encourages new fans to join Spotify each week.

Our Business Model

We offer both Premium and Ad-Supported Services. Our Premium and Ad-Supported Services live independently, but thrive together. We believe this business model has allowed us to achieve scale with attractive unit economics and is a critical part of our success. Our Ad-Supported Service serves as a funnel, driving a significant portion of our total gross added Premium Subscribers. With a 25% increase in revenue from our Ad-Supported Service from 2018 to 2019, we believe our Ad-Supported Service is a strong and viable stand-alone product with considerable long-term opportunity for growth in Ad-Supported Users and revenue. However, we face intense competition in growing both our Ad-Supported Users and Premium Subscribers, as well as in keeping our users highly engaged. If user engagement declines or if we fail to continue to grow our Ad-Supported User base or Premium Subscriber base, our revenue growth will be negatively impacted. See “Risk Factors—Risks Related to Our Business—If our efforts to attract prospective users and to retain existing users are not successful, our growth prospects and revenue will be adversely affected.”

We continue to invest heavily in developing our two-sided marketplace with new and better product features and functionality for users and creators and believe our investments are leading to higher user engagement and enjoyment. We provide personalization that drives a unique and tailored experience to each user and the tools for artists to reach the widest fan base.

We are currently in 79 countries and territories, including our latest launch in India in February 2019, and are growing in each of our four geographic regions. Europe is our largest region with 95 million MAUs, accounting for 35% of our total MAUs as of December 31, 2019, an increase of 26% from the prior year. In our North America region, MAUs increased by 17% from December 31, 2018 to December 31, 2019 and now account for 27% of our MAUs. Our two fastest growing regions are Latin America, with 22% of our MAUs, an increase of 34% from December 31, 2018 to December 31, 2019, and the rest of the world, with 16% of our MAUs, an increase of 78% from December 31, 2018 to December 31, 2019.

Our Ad-Supported Users and Premium Subscribers are spending more time with the Service each year. Combined, our audience streamed 73 billion hours of content for the year ended December 31, 2019, an increase of 34% compared to the year ended December 31, 2018.

Premium Service

Our Premium Service provides Premium Subscribers with unlimited online and offline high-quality streaming access to our catalog of music and podcasts. In addition to accessing our catalog on computers, tablets, and mobile devices, users can connect through speakers, receivers, televisions, cars, game consoles, and smart watches. The Premium Service offers a music listening experience without commercial breaks.

We generate revenue for our Premium segment through the sale of Premium Services. Premium Services are sold directly to end users and through partners who are generally telecommunications companies that bundle the subscription with their own services or collect payment for the stand-alone subscriptions from end customers.

We offer a variety of subscription pricing plans for our Premium Service, including our standard plan, Family Plan, and Student Plan, among others, to appeal to users with different lifestyles and across various demographics and age groups. Our pricing varies by plan and is adapted to each local market to align with consumer purchasing power, general cost levels, and willingness to pay for an audio service.

We also bundle the Premium Service with third-party services and products.

In addition, as we have entered into new markets where recurring subscription services are less common, we have expanded our subscription products to include prepaid options and durations other than monthly (both longer and shorter durations), as well as expanded both online and offline payment options.

Premium partner services are priced on a per-subscriber rate in a negotiated agreement.

Revenue for our Premium segment is a function of the number of Premium Subscribers who use our Premium Service. As of December 31, 2019 and 2018, we had approximately 124 million and 96 million Premium Subscribers, respectively. New Premium Subscribers primarily are sourced from the conversion of our Ad-Supported Users to Premium Subscribers. Through both our online platform and external marketing efforts, we engage our Ad-Supported Users by highlighting key features that encourage conversion to our subscription offerings. These efforts include product links, campaigns targeting existing users, and performance marketing across leading social media platforms. Additionally, new subscriber growth also is driven by the success of converting users from our trial programs to full-time Premium Subscribers. These trial campaigns typically offer our Premium Service free or at a discounted price for a period of time.

Ad-Supported Service

Our Ad-Supported Service has no subscription fees and generally provides Ad-Supported Users with limited on-demand online access to our catalog of music and unlimited online access to our catalog of podcasts on their computers, tablets, and compatible mobile devices. We generate revenue for our Ad-Supported segment from the sale of display, audio, and video advertising delivered through advertising impressions across our music and podcast content. We generally enter into arrangements with advertising agencies that purchase advertising on our platform on behalf of the agencies' clients. These advertising arrangements typically specify the type of advertising product, pricing, insertion dates, and number of impressions in a stated period. Revenue for our Ad-Supported segment is affected primarily by, but not limited to, the number of our Ad-Supported Users, the total content hours per MAU of our Ad-Supported Users, and our ability to provide innovative advertising products that are relevant to our Ad-Supported Users and enhance returns for our advertising partners. Our advertising strategy centers on the belief that advertising products that are based in music and

podcasts and are relevant to the Ad-Supported User can enhance Ad-Supported Users' experiences and provide even greater returns for advertisers. We have historically introduced, and continue to introduce, new advertising products across both music and podcast content. Offering advertisers additional ways to purchase advertising on a programmatic basis is a key way that we intend to expand our portfolio of advertising products and enhance advertising revenue. Furthermore, we continue to focus on analytics and measurement tools to evaluate, demonstrate, and improve the effectiveness of advertising campaigns on our platform.

Licensing Agreements

In order to stream content to our users, we generally secure intellectual property rights to such content by obtaining licenses from, and paying royalties or other consideration to, rights holders or their agents. Below is a summary of certain provisions of our license agreements relating to sound recordings and the musical compositions embodied therein (i.e., the musical notes and the lyrics), as well as podcasts and other non-music content.

Sound Recording License Agreements with Major and Independent Record Labels

We have license agreements with record label affiliates of the three largest music companies—Universal Music Group, Sony Music Entertainment, and Warner Music Group—as well as Merlin, which represents the digital rights on behalf of numerous independent record labels. These agreements require us to pay royalties and make minimum guaranteed payments, and they include marketing commitments, advertising inventory, and financial and data reporting obligations. Rights to sound recordings granted pursuant to these agreements accounted for over 82% of music streams for the year ended December 31, 2019. Generally (with certain exceptions), these license agreements have a duration of between one and two years, are not automatically renewable, and apply worldwide (subject to agreement on rates with certain rights holders prior to launching in new territories). The license agreements also allow for the record label to terminate the agreement in certain circumstances, including, for example, our failure to timely pay sums due within a certain period, our breach of material terms, and in some situations which could constitute a “change of control” of Spotify. These agreements generally provide that the record labels have the right to audit us for compliance with the terms of these agreements. Further, they contain “most favored nations” provisions, which require that certain material contract terms are at least as favorable as the terms we have agreed to with any other record label. As of December 31, 2019, we have estimated future minimum guarantee commitments of €1.0 billion. See “Risk Factors—Risks Related to Our Business—Minimum guarantees required under certain of our license agreements may limit our operating flexibility and may adversely affect our business, operating results, and financial condition.”

We also have direct license agreements with independent labels, as well as companies known as “aggregators” (for example, Believe Digital, CDBaby, Distrokid, and TuneCore). The majority of these agreements are worldwide (subject to agreement on rates with certain rights holders prior to launching in new territories) but others, with local repertoire, are limited to certain launch territories. These agreements have financial and data reporting obligations and audit rights.

Musical Composition License Agreements with Music Publishers

We generally obtain licenses for two types of rights with respect to musical compositions: mechanical rights and public performance rights. In the United States, the rates that the Copyright Royalty Board set apply both to compositions that we license under the compulsory license in Section 115 of the Copyright Act and to a number of direct licenses that we have with music publishers for U.S. rights, in which the applicable rate is generally pegged to the statutory rate set by the Copyright Royalty Board. In the United States, all compulsory licenses obtained by Spotify pursuant to Section 115 of the Copyright Act and direct licenses entered into between Spotify and music publishers are administered by a third-party company, the Harry Fox Agency. In January 2021, Spotify will begin obtaining a new blanket compulsory license available under U.S. law, administered by an entity called the Mechanical Licensing Collective. The Phonorecords III Proceedings set the rates for the Section 115 compulsory license for calendar years 2018 to 2022. The Copyright Royalty Board issued its final written determination in November 2018. Based on management's estimates and forecasts for the next two fiscal years, we currently believe that the rates determined by the Copyright Royalty Board will increase our royalty costs in 2020. The rates set by the Copyright Royalty Board may still be modified if the determination is overturned in the appeals process. In March 2019, we, Google, Amazon, and Pandora each filed an appeal of the Copyright Royalty Board's determination. We cannot assure you that the outcome of the appeal will be successful in our favor or that any changes to the rates or terms determined by the Copyright Royalty Board or the application of such rates or terms will not adversely affect our business, operating results, and financial condition, prospectively or retrospectively. The rates set by the Copyright Royalty Board are also subject to further change as part of future Copyright Royalty Board proceedings. If any such rate change increases our content acquisition costs and impacts our ability to obtain content on pricing terms favorable to us, it could hinder our ability to provide interactive features in our services, or cause one or more of our services not to be economically viable.

In the United States, public performance rights are generally obtained through intermediaries known as PROs, which negotiate blanket licenses with copyright users for the public performance of compositions in their repertory, collect royalties under such

licenses, and distribute those royalties to copyright owners. We have obtained public performance licenses from, and pay license fees to, the major PROs in the United States—ASCAP, BMI, and SESAC, among others. These agreements have music usage reporting obligations on Spotify and audit rights for the PROs. In addition, these agreements typically have one- to two-year terms, and some have continuous renewal provisions, with either party able to terminate for convenience with one to two months' prior written notice, and are limited to the territory of the United States and its territories and possessions.

In other parts of the world, including Europe, Asia Pacific, and Latin America, we obtain mechanical and performance licenses for musical compositions either through local collecting societies representing publishers or from publishers directly, or a combination thereof. We cannot guarantee that our licenses with collecting societies and our direct licenses with publishers provide full coverage for all of the musical compositions we make available to our users in such countries. Our license agreements with local collecting societies and direct license agreements with publishers worldwide are generally in place for one to three years and provide for reporting obligations on both Spotify and the licensor and auditing rights for the licensors. Certain of these license agreements also provide for minimum guaranteed payments or advance payment obligations.

Podcast License Agreements with Podcasters and Podcast Networks

With respect to podcasts and other non-music content for which we obtain distribution rights directly from rights holders, we either negotiate licenses directly with individuals or entities or obtain rights through our owned and operated platforms, such as Anchor, Soundtrap for Storytellers, and Spotify for Podcasters, that enable creators to post content directly to our Service after agreeing to comply with the applicable terms and conditions.

For original content that we produce or commission, we typically enter into multi-year commitments. Payment terms for content that we produce or commission will often require payments in advance of delivery of content. Some of these agreements also require us to share associated revenues, which can include minimum guarantees, and include other payments contingent on performance of the content.

License Agreement Extensions and Renewals

From time to time, our license agreements with certain rights holders and/or their agents expire while we negotiate their renewals. Per industry custom and practice, we may enter into brief (for example, month-, week-, or even days-long) extensions of those agreements or provisional licenses and/or continue to operate on an at will basis as if the license agreement had been extended, including by our continuing to make content available. It is also possible that such agreements will never be renewed at all. The lack of renewal, or termination, of one or more of our license agreements, or the renewal of a license agreement on less favorable terms, could have a material adverse effect on our business, financial condition, and results of operations. See “Risk Factors—Risks Related to Our Business—We depend upon third-party licenses for most of the content we stream and an adverse change to, loss of, or claim that we do not hold any necessary licenses may materially adversely affect our business, operating results, and financial condition.”

Government Regulation

We are subject to many U.S. federal and state, European, Luxembourg, and other foreign laws and regulations, including those related to privacy, data protection, content regulation, intellectual property, consumer protection, rights of publicity, health and safety, employment and labor, competition, and taxation. These laws and regulations are constantly evolving and may be interpreted, applied, created, or amended in a manner that could harm our business. In addition, it is possible that certain governments may seek to block or limit our products or otherwise impose other restrictions that may affect the accessibility or usability of any or all of our products for an extended period of time or indefinitely.

In the area of information security and data protection, the laws in several jurisdictions require companies to implement specific information security controls to protect certain types of information. Data protection, privacy, cybersecurity, consumer protection, content regulation, and other laws and regulations can be very stringent and vary from jurisdiction to jurisdiction. For example, we are subject to the GDPR, which came into effect on May 25, 2018, as well as its implementing legislation in the EU member states. The GDPR implements more stringent operational requirements for processors and controllers of personal data, including, for example, requiring enhanced disclosures to data subjects about how personal data is processed, limiting retention periods of personal data, requiring mandatory data breach notification, and requiring additional policies and procedures to comply with the accountability principle under the GDPR. In addition, data subjects have more robust rights with regard to their personal data and can withdraw their consent to data processing at any time. The GDPR includes significant penalties for non-compliance. We will remain subject to a similar legal regime in the United Kingdom even where it ceases to be an EU member state, by virtue of its national legislation that was edited to implement the GDPR; the United Kingdom may also implement new or amended data protection legislation. We are also subject to the CCPA, which came into effect on January 1, 2020, and imposes heightened transparency obligations and creates

new data privacy rights for California residents. Similar laws coming into effect in other states, adoption of a comprehensive federal data privacy law, and new legislation in international jurisdictions may continue to change the data protection landscape globally and could result in us expending considerable resources to meet these requirements. See “Risk Factors—Risks Related to Our Business—Our business is subject to a variety of laws around the world. Government regulation of the internet is evolving and any changes in government regulations relating to the internet or other areas of our business or other unfavorable developments may adversely affect our business, operating results, and financial condition” and “—Various regulations as well as self-regulation related to privacy and data security concerns pose the threat of lawsuits, regulatory fines and other liability, require us to expend significant resources, and may harm our business, operating results, and financial condition.”

C. Organizational Structure

The Company’s principal subsidiaries as at December 31, 2019 are as follows:

Name	Principal activities	Proportion of voting rights and shares held (directly or indirectly)	Country of incorporation
Spotify AB	Main operating company	100%	Sweden
Spotify USA Inc.	USA operating company	100%	USA
Spotify Ltd	Sales, marketing, contract research and development, and customer support	100%	UK
Spotify Norway AS	Sales and marketing	100%	Norway
Spotify Spain S.L.	Sales and marketing	100%	Spain
Spotify GmbH	Sales and marketing	100%	Germany
Spotify France SAS	Sales and marketing	100%	France
Spotify Netherlands B.V.	Sales and marketing	100%	Netherlands
Spotify Canada Inc.	Sales and marketing	100%	Canada
Spotify Australia Pty Ltd	Sales and marketing	100%	Australia
Spotify Brasil Serviços De Música LTDA	Sales and marketing	100%	Brazil
Spotify Japan K.K	Sales and marketing	100%	Japan
Spotify India LLP	Sales and marketing	100%	India
Spotify Singapore Pte Ltd.	Marketing	100%	Singapore

D. Property, Plant and Equipment

Spotify’s principal operational offices are located in Stockholm, Sweden and New York, New York under leases for approximately 375,000 and 594,000 square feet of office space respectively, expiring on September 30, 2027 and April 2034, respectively. We also lease regional offices in Los Angeles, California; San Francisco, California; Boston, Massachusetts; Dallas, Texas; Chicago, Illinois; Seattle, Washington; Atlanta, Georgia; Miami, Florida; Nashville, Tennessee; and Washington D.C. We also lease other offices in Sweden and lease office space in Argentina, Australia, Belgium, Brazil, Canada, Colombia, Denmark, Finland, France, Germany, India, Indonesia, Italy, Japan, Luxembourg, Malaysia, Mexico, Netherlands, Norway, Philippines, Poland, Russia, Singapore, Spain, Taiwan, the United Arab Emirates, and the United Kingdom.

During 2019, to accommodate anticipated future growth, we finished construction on build-outs at our new and existing leased office spaces in New York, Stockholm, Boston, London and São Paulo, among others. In 2019, we capitalized €126 million of fixed assets principally related to these build-outs. We have planned capital expenditures of approximately €142 million in 2020 for additional projects in Los Angeles, New York, Berlin, Singapore, and Miami among others.

We believe that our existing facilities are adequate to meet current requirements and that suitable additional or substitute space will be available as needed to accommodate any further physical expansion of operations and for any additional offices.

Item 4A. Unresolved Staff Comments

None

Item 5. Operating and Financial Review and Prospects

For discussion related to our financial condition, changes in financial condition, and the results of operations for 2018 compared to 2017, refer to Part I, Item 5. Operating and Financial Review and Prospects, in our Annual Report on Form 20-F for the fiscal year ended December 31, 2018, which was filed with the United States Securities and Exchange Commission on February 12, 2019.

Overview

Our mission is to unlock the potential of human creativity by giving a million creative artists the opportunity to live off their art and billions of fans the opportunity to enjoy and be inspired by these creators.

We are the most popular global audio streaming subscription service. With a presence in 79 countries and territories and growing, our platform includes 271 million MAUs and 124 million Premium Subscribers as of December 31, 2019.

Our users are highly engaged. We currently monetize our Service through both subscriptions and advertising. Our Premium Subscribers grew 29% year-over-year as of December 31, 2019 to 124 million. Our 271 million MAUs grew 31% year-over-year as of December 31, 2019.

How We Generate Revenue

We operate and manage our business in two reportable segments—Premium and Ad-Supported. We identify our reportable segments based on the organizational units used by management to monitor performance and make operating decisions. See Note 6 to our consolidated financial statements included elsewhere in this report for additional information regarding our reportable segments.

Premium

Our Premium Service provides Premium Subscribers with unlimited online and offline high-quality streaming access to our catalog of music and podcasts. In addition to accessing our catalog on computers, tablets, and mobile devices, users can connect through speakers, receivers, televisions, cars, game consoles, and smart watches. The Premium Service offers a music listening experience without commercial breaks.

We generate revenue for our Premium segment through the sale of the Premium Service. The Premium Service is sold directly to end users and through partners who are generally telecommunications companies that bundle the subscription with their own services or collect payment for the stand-alone subscriptions from the end user.

We offer a variety of subscription pricing plans for our Premium Service, including our standard plan, Family Plan, and Student Plan, among others, to appeal to users with different lifestyles and across various demographics and age groups. Our pricing varies by plan and is adapted to each local market to align with consumer purchasing power, general cost levels, and willingness to pay for an audio service. Our Family Plan consists of one primary Premium Subscriber and up to five additional sub-accounts, allowing up to six Premium Subscribers per Family Plan subscription.

We also bundle the Premium Service with third-party services and products.

In addition, as we have entered into new markets where recurring subscription services are less common, we have expanded our subscription products to include prepaid options and durations other than monthly (both longer and shorter durations), as well as expanded both online and offline payment options.

Premium partner services are priced on a per-subscriber rate in a negotiated agreement and may include minimum guarantees for the number of subscriptions that will be purchased from us.

Revenue for our Premium segment is a function of the number of Premium Subscribers who subscribe to our Premium Service. New Premium Subscribers are sourced primarily from the conversion of our Ad-Supported Users to Premium Subscribers. Through both our online platform and external marketing efforts, we engage our Ad-Supported Users by highlighting key features that encourage conversion to our subscription offerings. These efforts include product links, campaigns targeting existing users, and performance marketing across leading social media platforms. Additionally, new Premium Subscriber growth is driven by the success of converting users from our trial campaigns to full-time Premium Subscribers. These trial campaigns typically offer our Premium Service free or at a discounted price for a period of time.

The rate of net growth in Premium Subscribers also is affected by our ability to retain our existing Premium Subscribers and the mix of subscription pricing plans. We have increased retention over time, as new features and functionality have led to increased user engagement and satisfaction. From a product perspective, while the launches of our Family Plan and our Student Plan have decreased

Premium ARPU (as further described below) due to the lower price points per Premium Subscriber for these Premium pricing plans, each of these Plans has helped improve retention across the Premium Service.

Our platform is built to work across multiple devices, including smartphones, desktops, cars, game consoles, and in-home devices. We have found that Premium Subscribers who access our Service over multiple devices have higher engagement and lower Premium Churn, which increases their expected lifetime value to Spotify.

Ad-Supported

Our Ad-Supported Service has no subscription fees and generally provides Ad-Supported Users with limited on-demand online access to our catalog of music and unlimited online access to our catalog of podcasts on their computers, tablets, and compatible mobile devices. It serves as both a Premium Subscriber acquisition channel and a robust option for users who are unable or unwilling to pay a monthly subscription fee but still want to enjoy access to a wide variety of high-quality audio content.

We generate revenue for our Ad-Supported segment from the sale of display, audio, and video advertising delivered through advertising impressions across our music and podcast content.

We generally enter into arrangements with advertising agencies that purchase advertising on our platform on behalf of the agencies' clients. These advertising arrangements typically specify the type of advertising product, pricing, insertion dates, and number of impressions in a stated period. Revenue for our Ad-Supported segment is comprised primarily of the number and hours of engagement of our Ad-Supported Users and our ability to provide innovative advertising products that are relevant to our Ad-Supported Users and enhance returns for our advertising partners. Our advertising strategy centers on the belief that advertising products that are based in music and podcasts and are relevant to the Ad-Supported User can enhance Ad-Supported Users' experiences and provide even greater returns for advertisers. Offering advertisers additional ways to purchase advertising on a programmatic basis is a key way that we intend to expand our portfolio of advertising products and enhance advertising revenue. Furthermore, we continue to focus on analytics and measurement tools to evaluate, demonstrate, and improve the effectiveness of advertising campaigns on our platform.

Revenue from our Ad-Supported segment also will be impacted by the demographic profile of our Ad-Supported Users, our ability to enable advertisers to reach their target audience with relevant advertising in the geographic markets in which we operate. A large percentage of our Ad-Supported Users are between 18 and 34 years old. This is a highly sought-after demographic that has traditionally been difficult for advertisers to reach. By offering advertisers increased "self-serve options," we expect to improve the efficiency and scalability of our advertising platform. Additionally, we believe that our largest markets, including Europe and North America, are among the top advertising markets globally. However, our continuing expansion into new geographic markets will present monetization challenges. Monetizing our Ad-Supported User base has historically been, and is expected to remain, more challenging in our two fastest growing regions, Latin America and the rest of the world, compared to Europe and North America.

Components of our Operating Results

Cost of Revenue. Cost of revenue consists predominantly of royalty and distribution costs related to content streaming. We incur royalty costs, which we pay to certain record labels, music publishers, and other rights holders, for the right to stream music to our users. Royalties are typically calculated monthly based on the combination of a number of different elements. Generally, Premium Service royalties are based on the greater of a percentage of revenue and a per user amount. Royalties for the Ad-Supported Service are typically a percentage of revenue, although certain agreements are based on the greater of a percentage of revenue and an amount for each time a sound recording and musical composition is streamed. We have negotiated lower per user amounts for our lower priced subscription plans such as Family Plan and Student Plan users. In our agreements with certain record labels, the percentage of revenue used in the calculation of royalties is generally dependent upon certain targets being met. The targets can include such measures as the number of Premium Subscribers, the ratio of Ad-Supported Users to Premium Subscribers, and/or the rates of Premium Subscriber churn. With minor exceptions, we are effectively currently meeting the targets and consequently we are generally paying the lowest percentage of revenue possible per the agreements. In addition, royalty rates vary by country. Some of our royalty agreements require that royalty costs be paid in advance or are subject to minimum guaranteed amounts. For the majority of royalty agreements incremental costs incurred due to un-recouped advances and minimum guarantees have not been significant to date. We also have certain so-called most favored nation royalty agreements, which require us to record additional costs if certain material contract terms are not as favorable as the terms we have agreed to with similar licensors.

Cost of revenue also includes credit card and payment processing fees for subscription revenue, customer service, certain employee compensation and benefits, cloud computing, streaming, facility, and equipment costs, as well as amounts incurred to produce podcasts and other content. Direct costs incurred to acquire or develop podcasts are recognized as current assets. Cost of revenue includes the consumption of these assets over their useful economic life, which starts at the release of each episode. In most cases, consumption is on an accelerated basis.

Additionally, cost of revenue has historically included discounted trial costs related to our bi-annual trial programs. While we believe our trial programs help drive incremental revenue and gross margins as users convert to full-time Premium Subscribers, these trial programs, which historically have typically begun in the last month of the second and fourth quarters of each year, have led to decreases in gross margins in the first and third calendar quarters as we absorb the promotional expenses of the discounted trial offers.

Research and Development. We invest heavily in research and development in order to drive user engagement and customer satisfaction on our platform, which we believe helps to drive organic growth in new MAUs, which in turn drives additional growth in, and better retention of, Premium Subscribers, as well as increased advertising opportunities to Ad-Supported Users. We aim to design products and features that create and enhance user experiences, and new technologies are at the core of many of these opportunities. Research and development expenses were 9%, 9%, and 10% of our total revenue in each of 2019, 2018, and 2017, respectively. Expenses primarily comprise costs incurred for development of products related to our platform and Service, as well as new advertising products and improvements to our mobile application and desktop application and streaming services. The costs incurred include related facility costs, consulting costs, and employee compensation and benefits costs. We expect engineers to represent a significant portion of our employees over the foreseeable future.

Many of our new products and improvements to our platform require large investments and involve substantial time and risks to develop and launch. Some of these products may not be well received or may take a long time for users to adopt. As a result, the benefits of our research and development investments may be difficult to forecast.

Sales and Marketing. Sales and marketing expenses primarily comprise employee compensation and benefits, public relations, branding, consulting expenses, customer acquisition costs, advertising, live events and trade shows, amortization of trade name intangible assets, the cost of working with music record labels, publishers, songwriters, and artists to promote the availability of new releases on our platform, and the costs of providing free trials of Premium Services. Expenses included in the cost of providing free trials are derived primarily from per user royalty fees determined in accordance with the rights holder agreements.

General and Administrative. General and administrative expenses primarily comprise employee compensation and benefits for functions such as finance, accounting, analytics, legal, human resources, consulting fees, and other costs including facility and equipment costs, officers' liability insurance, director fees, and fair value adjustments on contingent consideration.

Key Performance Indicators

We use certain key performance indicators to monitor and manage our business. We use these indicators to evaluate our business, measure our performance, identify trends affecting our business, formulate business plans, and make strategic decisions. We believe these indicators provide useful information to investors in understanding and evaluating our operating results in the same manner we do.

MAUs

We track MAUs as an indicator of the size of the audience engaged with our Service. We define MAUs as the total count of Ad-Supported Users and Premium Subscribers that have consumed content for greater than zero milliseconds in the last thirty days from the period-end indicated. Reported MAUs may overstate the number of unique individuals who actively use our Service within a thirty-day period as one individual may register for, and use, multiple accounts. Additionally, fraud and unauthorized access to our Service may contribute, from time to time, to an overstatement of MAUs, if undetected. Fraudulent accounts typically are created by bots to inflate content licensing payments to individual rights holders. We strive to detect and minimize these fraudulent accounts. Our MAUs in the tables below are inclusive of users that may have employed methods to limit or otherwise avoid being served advertisements. For additional information, refer to the risk factors discussed under "Item 3.D. Risk Factors" included elsewhere in this report.

The table below sets forth our MAUs as of December 31, 2019, 2018, and 2017.

	As of December 31,			Change			
	2019	2018	2017	2019 vs. 2018		2018 vs. 2017	
	(in millions, except percentages)						
MAUs	271	207	160	64	31%	47	29%

MAUs were 271 million as of December 31, 2019. This represented an increase of 31% from the preceding fiscal year. The increase in MAUs benefited from our continued investment in driving the growth of our Service, both through geographic expansion and consumer marketing. The increase also benefited from continued investment in content and features on our platform, including

featured playlists, artist marketing campaigns, podcasts, and original content, to drive increased user engagement and customer satisfaction. MAUs were positively impacted by an increase in Premium Subscribers, as noted below.

Premium Subscribers

We define Premium Subscribers as users that have completed registration with Spotify and have activated a payment method for Premium Service. Our Premium Subscribers include all registered accounts in our Family Plan. Our Family Plan consists of one primary subscriber and up to five additional sub-accounts, allowing up to six Premium Subscribers per Family Plan Subscription. Premium Subscribers includes subscribers in a grace period of up to 30 days after failing to pay their subscription fee.

The table below sets forth our Premium Subscribers as of December 31, 2019, 2018, and 2017.

	As of December 31,			Change			
	2019	2018	2017	2019 vs. 2018		2018 vs. 2017	
	(in millions, except percentages)						
Premium Subscribers	124	96	71	28	29%	26	36%

Premium Subscribers were 124 million as of December 31, 2019. This represented an increase of 29% from the preceding fiscal year. Our Family Plan contributed 33% of total gross added Premium Subscribers during 2019. Further, our free trial offers and global campaigns contributed 23% and 10% of gross added Premium Subscribers during 2019, respectively.

Ad-Supported MAUs

We define Ad-Supported MAUs as the total count of Ad-Supported Users that have consumed content for greater than zero milliseconds in the last thirty days from the period-end indicated.

The table below sets forth our Ad-Supported MAUs as of December 31, 2019, 2018, and 2017.

	As of December 31,			Change			
	2019	2018	2017	2019 vs. 2018		2018 vs. 2017	
	(in millions, except percentages)						
Ad-Supported MAUs	153	116	93	37	32%	23	24%

Ad-Supported MAUs were 153 million as of December 31, 2019. This represented an increase of 32% from the preceding fiscal year. Growth in Ad-Supported MAUs benefited from our continued investment in driving the growth of our Ad-Supported Service, both through geographic expansion and consumer marketing. The increase also benefited from continued investment in content and features on our platform, including featured playlists, artist marketing campaigns, podcasts, and original content, to drive increased Ad-Supported User engagement and customer satisfaction.

Premium ARPU

Premium ARPU is a monthly measure defined as Premium revenue recognized in the quarter indicated divided by the average daily Premium Subscribers in such quarter, which is then divided by three months. Annual figures are calculated by averaging Premium ARPU for the four quarters in such fiscal year.

The table below sets forth our average Premium ARPU for the years ended December 31, 2019, 2018, and 2017.

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
Premium ARPU	€ 4.72	€ 4.81	€ 5.32	€ (0.09)	(2)%	€ (0.51)	(10)%

For the year ended December 31, 2019, Premium ARPU was €4.72. This represented a decrease of 2% from the preceding fiscal year. The decrease in Premium ARPU for the year ended December 31, 2019, as compared to 2018, was due principally to the continued growth of the Family Plan and an increase in the number of subscribers on free trials, reducing Premium ARPU by €0.08 and €0.05, respectively. These impacts were partially offset by movements in foreign exchange rates, increasing Premium ARPU by €0.06.

The table below sets forth our average Premium ARPU for the quarters ended December 31, 2019, 2018, and 2017.

	Three months ended December 31,			Change	
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017
Premium ARPU	€ 4.65	€ 4.89	€ 5.24	€ (0.24)	(5)% € (0.35) (7)%

For the quarter ended December 31, 2019, Premium ARPU was €4.65. This represented a decrease of 5% from the preceding fiscal year quarter ended December 31. The decrease in Premium ARPU for the quarter ended December 31, 2019, as compared to 2018, was due principally to an increase in the number of subscribers on free trials and the continued growth of the Family Plan, reducing Premium ARPU by €0.21 and €0.05, respectively. These impacts were partially offset by movements in foreign exchange rates, increasing Premium ARPU by €0.05.

A. Operating Results

Revenue

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018		2018 vs. 2017	
	(in € millions, except percentages)						
Premium	6,086	4,717	3,674	1,369	29%	1,043	28%
Ad-Supported	678	542	416	136	25%	126	30%
Total	6,764	5,259	4,090	1,505	29%	1,169	29%

Premium revenue

For the years ended December 31, 2019 and 2018, Premium revenue comprised 90% of our total revenue. For the year ended December 31, 2019, as compared to 2018, Premium revenue increased €1,369 million or 29%. The increase was attributable primarily to a 29% increase in Premium Subscribers.

Ad-Supported revenue

For the year ended December 31, 2019 and 2018, Ad-Supported revenue comprised 10% of our total revenue. For the year ended December 31, 2019, as compared to 2018, Ad-Supported revenue increased €136 million or 25%. This increase was due primarily to a 17% increase in the number of impressions sold, driven largely by the growth in our programmatic channel, which grew revenue 47% year-over-year, accounting for 25% of our Ad-Supported revenue. In addition, there was an increase in revenue from podcasts of €19 million.

Foreign exchange impact on total revenue

The general weakening of the Euro relative to certain foreign currencies, primarily the U.S. dollar for the year ended December 31, 2019, as compared to 2018, had a favorable impact on our revenue. We estimate that total revenue for the year ended December 31, 2019 would have been approximately €117 million lower if foreign exchange rates had remained consistent with foreign exchange rates for the year ended December 31, 2018.

Cost of revenue

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
	(in € millions, except percentages)						
Premium	4,465	3,461	2,868	1,004	29%	593	21%
Ad-Supported	577	445	373	132	30%	72	19%
Total	5,042	3,906	3,241	1,136	29%	665	21%

Premium cost of revenue

For the year ended December 31, 2019, as compared to 2018, Premium cost of revenue increased €1,004 million, or 29%, and Premium cost of revenue as a percentage of Premium revenue remained at 73%. The increase in Premium cost of revenue was driven by an increase in new Premium Subscribers resulting in higher royalty costs, payment fees, and streaming delivery costs of €898 million, €43 million, and €17 million respectively. The year ended December 31, 2019 also included charges related to disputes with certain rights holders of €8 million. The year ended December 31, 2018 included changes in prior period estimates, which reduced rights holders costs by €21 million, a benefit of €18 million for amounts expected to be recovered from rights holders for retroactive statutory rate changes, and a €12 million charge that relates to prior years.

Ad-Supported cost of revenue

For the year ended December 31, 2019, as compared to 2018, Ad-Supported cost of revenue increased €132 million, or 30%, and Ad-Supported cost of revenue as a percentage of Ad-Supported revenue increased from 82% to 85%. The increase in Ad-Supported cost of revenue is driven by growth in advertising revenue resulting in higher royalty costs and streaming delivery costs of €93 million and €6 million, respectively, and an increase in podcasts costs of €16 million.

Foreign exchange impact on total cost of revenue

The general weakening of the Euro relative to certain foreign currencies, primarily the U.S. dollar for the year ended December 31, 2019, as compared to 2018, had an unfavorable impact on our cost of revenue. We estimate that total cost for the year ended December 31, 2019 would have been approximately €83 million lower, if foreign exchange rates had remained consistent with foreign exchange rates for the year ended December 31, 2018.

Gross profit and gross margin

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
	(in € millions, except percentages)						
Gross profit							
Premium	1,621	1,256	806	365	29%	450	56%
Ad-Supported	101	97	43	4	4%	54	126%
Consolidated	<u>1,722</u>	<u>1,353</u>	<u>849</u>	<u>369</u>	27%	<u>504</u>	59%
Gross margin							
Premium	27%	27%	22%				
Ad-Supported	15%	18%	10%				
Consolidated	25%	26%	21%				

Premium gross profit and gross margin

For the year ended December 31, 2019, as compared to 2018, Premium gross profit increased by €365 million and Premium gross margin remained at 27%. Premium gross margin remained flat due primarily to consistent licensing terms with the major labels year-over-year.

Ad-Supported gross profit and gross margin

For the year ended December 31, 2019, as compared to 2018, Ad-Supported gross profit increased by €4 million to a gross profit of €101 million, and Ad-Supported gross margin decreased from 18% to 15%. The decrease in margin was largely driven by an increase in content costs, including podcast costs, that outpaced revenue growth.

Consolidated operating expenses

Research and development

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
	(in € millions, except percentages)						
Research and development	615	493	396	122	25%	97	24%
As a percentage of revenue	9%	9%	10%				

For the year ended December 31, 2019, as compared to 2018, research and development costs increased €122 million, or 25%, as we continually enhance our platform to retain and grow our user base. The increase was due primarily to an increase in personnel-related costs of €80 million and facilities costs of €10 million, each resulting from increased headcount and leased office space to support our growth. There also was an increase in information technology costs of €20 million due to an increase in our usage of cloud computing services and additional software license fees. The increase in personnel-related costs was due primarily to increased salaries of €49 million, share-based payments of €23 million, and social costs of €13 million.

Sales and marketing

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
	(in € millions, except percentages)						
Sales and marketing	826	620	567	206	33%	53	9%
As a percentage of revenue	12%	12%	14%				

For the year ended December 31, 2019, as compared to 2018, sales and marketing expense increased by €206 million, or 33%. The increase was due primarily to an increase in advertising costs of €107 million for marketing campaigns. There also was an increase in personnel-related costs of €51 million resulting from increased headcount to support our growth. There was an increase in the cost of providing free trials of €26 million due to an increase in the number of subscribers on free trials. The increase in personnel-related costs was due primarily to increased salaries of €32 million, share-based payments of €8 million, and social costs of €6 million.

General and administrative

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
	(in € millions, except percentages)						
General and administrative	354	283	264	71	25%	19	7%
As a percentage of revenue	5%	5%	6%				

For the year ended December 31, 2019, as compared to 2018, general and administrative expense increased €71 million or 25%. The increase was due primarily to an increase in personnel-related costs of €44 million, resulting from increased headcount and an increase in external consulting and legal fees of €32 million. In addition, the year ended December 31, 2019 included a €14 million of fair value loss on contingent consideration. There were also increases in facilities and information technology costs of €5 million. The increase in personnel-related costs was due primarily to increased salaries of €35 million and share-based payments of €4 million. These expenses were partially offset by €35 million of expenses in the prior period relating to our direct listing.

Finance income

Finance income consists of fair value adjustment gains on certain financial instruments, interest income earned on our cash and cash equivalents and short term investments, and foreign currency gains.

	Year ended December 31,			Change			
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017		
	(in € millions, except percentages)						
Finance income	275	455	118	(180)	(40)%	337	286%
As a percentage of revenue	4%	9%	3%				

For the year ended December 31, 2019, as compared to 2018, finance income decreased €180 million. The decrease in finance income was due primarily to a decrease in fair value gains for warrants of €194 million and non-designated hedges of €8 million. These decreases were partially offset by an increase in foreign exchange gains of €18 million on the remeasurement of monetary assets and liabilities in a transaction currency other than the functional currency.

Finance costs

Finance costs consist of fair value adjustment losses on financial instruments, interest expense, and foreign currency losses.

	Year ended December 31,			Change	
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017
	(in € millions, except percentages)				
Finance costs	(333)	(584)	(974)	251	(43)%
As a percentage of revenue	(5)%	(11)%	(24)%		(40)%

For the year ended December 31, 2019, as compared to 2018, finance costs decreased by €251 million. This decrease was due primarily to a decrease of expense recorded for convertible senior notes (“Convertible Notes”) of €201 million, due to the derecognition of our Convertible Notes upon direct listing in 2018 and a decrease in fair value losses recorded for warrants of €125 million. These decreases were partially offset by an increase in interest expense on lease liabilities of €38 million due to the adoption of IFRS 16 on January 1, 2019 and an increase in foreign exchange losses of €38 million on the remeasurement of monetary assets and liabilities in a transaction currency other than the functional currency.

Income tax expense/(benefit)

	Year ended December 31,			Change	
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017
	(in € millions, except percentages)				
Income tax expense/(benefit)	55	(95)	2	150	(158)%
As a percentage of revenue	1%	(2)%	0%		N/A

For the year ended December 31, 2019, income tax expense was €55 million, as compared to income tax benefit of €95 million for the year ended December 31, 2018. The change was due primarily to the derecognition of deferred taxes as a result of the unrealized decrease in the fair value of our long term investment in TME. The Group will be subject to deferred tax in future periods as a result of foreign exchange movements between USD, EUR, and SEK, primarily related to its investment in TME. The Group may also be subject to current tax expense in future periods as a result of share based compensation activity.

Net loss attributable to owners of the parent

	Year ended December 31,			Change	
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017
	(in € millions, except percentages)				
Net loss attributable to owners of the parent	(186)	(78)	(1,235)	(108)	138%
As a percentage of revenue	(3)%	(1)%	(30)%		(94)%

For the year ended December 31, 2019, as compared to 2018, net loss attributable to owners of the parent increased by €108 million, due primarily to an increase in income tax expense and an increase in operating loss offset by a decrease in finance income/(costs) – net.

EBITDA

	Year ended December 31,			Change	
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017
	(in € millions, except percentages)				
EBITDA	14	(11)	(324)	25	(227)%
As a percentage of revenue	0%	(0)%	(8)%		(97)%

For the year ended December 31, 2019, EBITDA was €14 million, as compared to EBITDA loss of €11 million for the year ended December 31, 2018. The change was due primarily to an increase in gross profit, partially offset by an increase in operating

expenses, as described above. The adoption of IFRS 16 on January 1, 2019 had a favorable impact on EBITDA for the year ended December 31, 2019 due to an increase in depreciation and lease liability interest expense. For a discussion of the limitations associated with using EBITDA rather than IFRS measures and a reconciliation of EBITDA to net loss, see Item “3.A. Selected Financial Data.”

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with IFRS as issued by the IASB. Preparing these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, equity, revenue, expenses, and related disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results may differ from these estimates.

The critical accounting estimates, assumptions, and judgments that we believe to have the most significant impact on our consolidated financial statements are described below.

Revenue Recognition

Premium Revenue

We generate revenue for our Premium segment from the sale of Premium Services. Premium Services are sold directly to end users and through partners who are generally telecommunications companies that bundle the subscription with their own services or collect payment for the stand-alone subscriptions from the end user.

Premium Services sold directly to end users are typically paid monthly in advance. We satisfy our performance obligation, and revenue from these services is recognized, on a straight-line basis over the subscription period.

We periodically provide discounted trial periods for Premium Services. Consideration received for the discounted trial periods is recognized in revenue on a straight-line basis over the term of the discounted trial period.

Premium Services sold through partners are recognized as revenue based on a per-subscriber rate in a negotiated partner agreement. Under these arrangements, a Premium partner may bundle the Premium Service with its existing product offerings or offer the Premium Service as an add-on. We satisfy our performance obligation, and revenue from these services is recognized, on a straight-line basis over the subscription period. We assess the facts and circumstances, including whether the partner is acting as a principal or agent, of all partner revenue arrangements and then recognize revenues either gross or net. Premium partner services, whether recognized gross or net, have one material performance obligation which is the delivery of our Premium Service.

We also bundle the Premium Service with third-party services and products. In bundle arrangements where we have multiple performance obligations, the transaction price is allocated to each performance obligation based on the relative stand-alone selling price. We generally determine stand-alone selling prices based on the prices charged to customers. For each performance obligation within the bundle, revenue is recognized either on a straight-line basis over the subscription period or at a point in time when control of the service or product is transferred to the customer.

Ad-Supported Revenue

We generate revenue for our Ad-Supported segment primarily through display, audio, and video advertising delivered through advertising impressions and podcast downloads. We enter into arrangements with advertising agencies that purchase advertising on our platform on behalf of the agencies' clients and directly with some large advertisers. These advertising arrangements are typically sold on a cost-per-thousand basis and are evidenced by an Insertion Order (“IO”) that specifies the terms of the arrangement such as the type of advertising product, pricing, insertion dates, and number of impressions in a stated period. Ad-Supported revenue is recognized upon delivery of impressions. IOs may include multiple performance obligations as they generally contain several different advertising products that each represent a separately identifiable promise within the contract. For such arrangements, we allocate Ad-Supported revenue to each performance obligation on a relative stand-alone selling price basis. We determine stand-alone selling prices based on the prices charged to customers. We also may offer cash rebates to advertising agencies based on the volume of advertising inventory purchased. These rebates are estimated based on historical data and projected spend and result in a reduction of revenue recognized.

Additionally, we generate Ad-Supported revenue through arrangements with certain advertising exchange platforms to distribute advertising inventory for purchase on a cost-per-thousand basis through their automated exchange. Ad-Supported revenue is recognized over time when impressions are delivered on the platform.

Share-based Payments

Our employees and members of our board of directors receive remuneration in the form of share-based payment transactions, whereby employees and directors render services in consideration for equity instruments.

The fair value of a stock option is estimated on the grant date using the Black-Scholes option-pricing model. The fair value of an RSU or restricted stock award is measured using the fair value of our ordinary shares on the date of the grant. Stock-based compensation expense is recognized, net of forfeitures, over the requisite service periods of the awards, which is generally less than five years.

Our use of the Black-Scholes option-pricing model requires the input of highly subjective assumptions, including expected term of the option, expected volatility of the price of our ordinary shares, risk-free interest rates, and the expected dividend yield of our ordinary shares. The assumptions used in our option-pricing model represent management's best estimates. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our stock-based compensation expense could be materially different in the future.

We also must estimate a forfeiture rate to calculate the stock-based compensation expense for our awards. Our forfeiture rate is based on an analysis of our actual forfeitures. We will continue to evaluate the appropriateness of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover, and other factors. Changes in the estimated forfeiture rate can have a significant impact on our stock-based compensation expense as the cumulative effect of adjusting the rate is recognized in the period the forfeiture estimate is changed. A higher revised forfeiture rate than previously estimated will result in an adjustment that will decrease the stock-based compensation expense recognized in the consolidated statement of operations. A lower revised forfeiture rate than previously estimated will result in an adjustment that will increase the stock-based compensation expense recognized in the consolidated statement of operations.

We will continue to use judgment in evaluating the assumptions related to our stock-based compensation on a prospective basis. As we accumulate additional data related to our ordinary shares, we may have refinements to our estimates, which could materially impact our future stock-based compensation expense.

Social costs are payroll taxes associated with employee salaries and benefits, including share-based compensation. Social costs in connection with granted options and RSUs are accrued over the vesting period based on the intrinsic value of the award that has been earned at the end of each reporting period. The amount of the liability reflects the amortization of the award and the impact of expected forfeitures. The social cost rate at which the accrual is made generally follows the tax domicile within which other compensation charges for a grantee are recognized.

Content

We incur royalty costs for the right to stream music to our users, paid to certain music record labels and other rights holders. Royalties are calculated using negotiated rates in accordance with license agreements, estimates of those rates in instances where rights holders are not identified, or rates as determined by government bodies. Calculations are based on either Premium and Ad-Supported revenue earned or user/usage measures or a combination of these. The rights holder agreements are complex and our determination of royalties payable involves certain significant judgments, assumptions, and estimates in addition to complex systems and a significant volume of data to be processed and analyzed. In particular, in certain jurisdictions rights holders have several years to claim royalties for works streamed each month. As such, the royalty costs incurred in a period might not be fully settled for a number of years and are estimated. The estimate of royalty costs requires us to make assumptions about the rates to be recorded for streams where the rights holder is not identified and the potential incidence of duplicate claims. These estimates are subject to revision until settlement. Considering the number of variables impacting the amounts owed, the actual outcome could be different than our estimates, resulting in an additional accrual or release of previously recorded liabilities.

In addition, some rights holders have allowed the use of their content on our platform while negotiations of the terms and conditions of individual agreements are ongoing. In these instances, royalties are calculated based on our best estimate of the eventual payout.

Many of the rights holders agreements include the right to audit our royalty payments, and any such audit could result in disputes over whether we have paid the proper royalties. Given the complexity of the arrangements, if such a dispute were to occur, we could be required to pay additional royalties, and the amounts involved could be material.

The majority of our rights holder liabilities are settled on commercial payment terms shortly after they are incurred. However, certain of these liabilities are not settled for more significant periods of time due to uncertainties related to the reasons discussed

above. Of the total accruals and provisions to rights holders at December 31, 2019 and December 31, 2018, approximately €295 million and €203 million, respectively, relate to liabilities that were incurred more than twelve months prior to the date of the statement of financial position. Of the December 31, 2019 amount, €17 million was expensed in the year ended December 31, 2019 due to an increase of estimates included in the financial statements for the year ended December 31, 2018.

From time to time, we are involved in legal actions or other third-party assertions related to content on our platform. There can be no assurance these actions or other third-party assertions will be resolved without costly litigation in a manner that does not adversely impact our financial position, results of operations, or cash flows, or without requiring higher royalty payments in the future, which may adversely impact gross margins. We record a liability when it is probable that a loss has been incurred and the amount can be reasonably estimated. In determining the probability of a loss and consequently, determining a reasonable estimate, management is required to use significant judgment. Given the uncertainties associated with any litigation, the actual outcome can be different from our estimates and could adversely affect our results of operations, financial position, and cash flows. See “Risk Factors—Risks Related to Our Business—Our royalty payment scheme is complex, and it is difficult to estimate the amount payable under our license agreements.”

We have certain arrangements whereby royalty costs are paid in advance or are subject to minimum guaranteed amounts. These minimum guarantee amounts have been disclosed in Note 24 of the consolidated financial statements, included elsewhere in this report. An accrual is established when actual royalty costs to be incurred during a contractual period are expected to fall short of the minimum guaranteed amounts. For minimum guarantee arrangements for which we cannot reliably predict the underlying expense, we will expense the minimum guarantee on a straight-line basis over the term of the arrangement. We also have certain royalty arrangements where we would have to make additional payments if the royalty rates for specified periods were below those paid to certain other licensors (most favored nation clauses). For rights holders with this clause, we compare royalties incurred to date plus estimated royalties payable for the remainder of the period to estimates of the royalties payable to other appropriate rights holders, and the shortfall, if any, is recognized on a straight-line basis over the period of the applicable most favored nation clause. An accrual and expense is recognized when it is probable that we will make additional royalty payments under these terms. The expense related to these accruals is recognized in cost of revenue.

Warrants

Our warrants are re-measured at each reporting date using valuation models using input data. The change in fair value of these financial liabilities are recognized in finance income or cost in the consolidated statement of operations. Our ordinary share price is a primary driver of the fair value of the warrants. If factors change and different assumptions are used, our finance costs (net) could be materially different in the future. Please refer to “Item 11. Quantitative and Qualitative Disclosures About Market Risk” included elsewhere in this report for additional information on the share price risk relate to our warrants.

See Note 23 to our consolidated financial statements included elsewhere in this report for additional information on the valuation models used for our warrants.

Income Taxes

We are subject to income taxes in Luxembourg, Sweden, the United States, and numerous foreign jurisdictions. Significant judgment is required in determining our uncertain tax positions.

Deferred tax assets are recognized for unused tax losses, unused tax credits, and deductible temporary differences to the extent that it is probable that future taxable profits will be available, against which they can be used. Unused tax loss carry-forwards are reviewed at each reporting date and have not been recorded when we believe we will not generate future taxable income to utilize the loss carry-forwards.

In determining the amount of current and deferred income tax, we take into account the impact of uncertain tax positions and whether additional taxes, interest, or penalties may be due. Although we believe that we have adequately reserved for our uncertain tax positions, we can provide no assurance that the final tax outcome of these matters will not be materially different. We adjust these reserves when facts and circumstances change, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made and could have a material impact on our financial condition and operating results.

We have initiated and are in negotiations of an APA between Sweden and the United States governments for tax years 2014 through 2020 covering various transfer pricing matters. These transfer pricing matters may be significant to our consolidated financial statements.

Business Combinations

In business combinations, we allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identified assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates, assumptions, and judgments, especially with respect to intangible assets and contingent consideration.

Lease Agreements

As most of our lease agreements do not provide an implicit rate of return, we use our incremental borrowing rate based on the information available at the lease commencement date to determine the present value of lease payments. For our lease agreements that existed prior to the adoption date of IFRS 16, we determined our incremental borrowing rate as of January 1, 2019. Our incremental borrowing rate is determined based on estimates and judgments, including the credit rating of our leasing entities and a credit spread.

Goodwill Impairment

In accordance with the accounting policy described in Note 2 to our consolidated financial statements included elsewhere in this report, the Group annually performs an impairment test regarding goodwill. The assumptions used for estimating fair value and assessing available headroom based on conditions that existed at the testing date are disclosed in Note 14 to our consolidated financial statements included elsewhere in this report.

Recent Accounting Pronouncements

See Note 2 to our consolidated financial statements included elsewhere in this report for recently adopted accounting pronouncements and recently issued accounting pronouncements not yet adopted as of the dates of the statement of financial position included in this report.

B. Liquidity and Capital Resources

Our principal sources of liquidity are our cash and cash equivalents, short term investments, and cash generated from operations. Cash and cash equivalents and short term investments consist mostly of cash on deposit with banks, investments in money market funds, and investments in government and agency securities, corporate debt securities, and collateralized reverse purchase agreements. Cash and cash equivalents and short term investments decreased by €49 million from €1,806 million as of December 31, 2018 to €1,757 million as of December 31, 2019.

We believe our existing cash and cash equivalent balances and the cash flow we generate from our operations will be sufficient to meet our working capital and capital expenditure needs and other liquidity requirements for at least the next 12 months. However, our future capital requirements may be materially different than those currently planned in our budgeting and forecasting activities and depend on many factors, including our rate of revenue growth, the timing and extent of spending on content and research and development, the expansion of our sales and marketing activities, the timing of new product introductions, market acceptance of our products, our continued international expansion, the acquisition of other companies, competitive factors, and overall economic conditions, globally. To the extent that current and anticipated future sources of liquidity are insufficient to fund our future business activities and requirements, we may be required to seek additional equity or debt financing. The sale of additional equity would result in additional dilution to our shareholders, while the incurrence of debt financing would result in debt service obligations. Such debt instruments also could introduce covenants that might restrict our operations. We cannot assure you that we could obtain additional financing on favorable terms or at all. See “Risk Factors—Risks Related to Our Business—We may require additional capital to support business growth and objectives, and this capital might not be available on acceptable terms, if at all.”

On November 5, 2018, Spotify Technology S.A. announced that it would commence a share repurchase program that began in the fourth quarter of 2018. Repurchases of up to 10,000,000 of the Company’s ordinary shares have been authorized by the Company’s general meeting of shareholders, and the board of directors approved such repurchase up to the amount of \$1.0 billion. During 2019, we repurchased 3,679,156 ordinary shares for €433 million in connection with the share repurchase program and we repurchased an aggregate of 4,366,427 ordinary shares for €510 million since the commencement of the share repurchase program. The repurchase program will expire on April 21, 2021. The timing and actual number of shares repurchased will depend on a variety of factors, including price, general business and market conditions, and alternative investment opportunities. The repurchase program will be executed consistent with our capital allocation strategy of prioritizing investment to grow the business over the long term. Under the repurchase program, repurchases can be made from time to time using a variety of methods, including open market purchases, all in compliance with the rules of the Commission and other applicable legal requirements. The repurchase program does not obligate the Company to acquire any particular amount of ordinary shares, and the repurchase program may be suspended or discontinued at any time at the Company’s discretion. We may use current cash and cash equivalents and the cash flow we generate from our operations to fund our share repurchase program.

Cash Flow

	Year ended December 31,		
	2019	2018 (in € millions)	2017
Net cash flows from operating activities	573	344	179
Net cash flows used in investing activities	(218)	(22)	(435)
Net cash flows (used in)/from financing activities	(203)	92	34

For the year ended December 31, 2019, as compared to 2018, net cash flows from operating activities increased by €229 million. The increase in net cash flows from operating activities was due primarily to changes in working capital of €200 million, due primarily to an increase in trade and other liabilities. In addition, there are payments on lease liabilities of €17 million included in financing activities as a result of adopting IFRS 16, as compared to none in the prior year as payments on our operating leases were included in operating activities for the year ended December 31, 2018.

For the year ended December 31, 2019, as compared to 2018, net cash flows used in investing activities increased by €196 million, due primarily to an increase in cash used in business combinations, net of cash acquired of €322 million, offset by an increase in net cash inflows from purchases and sales of investments of €105 million and an increase in cash inflows from restricted cash of €12 million.

For the year ended December 31, 2019, as compared to 2018, net cash flows used in financing activities increased by €295 million, due primarily to an increase in treasury share purchases of €366 million and an increase in payments of lease liabilities of €17 million. These increases were partially offset by an increase in the proceeds from the issuance and exercise of warrants of €89 million and an increase in lease incentives received of €15 million.

Free Cash Flow

	Year ended December 31,		
	2019	2018 (in € millions)	2017
Free Cash Flow	440	209	109

For the year ended December 31, 2019, as compared to 2018, Free Cash Flow increased by €231 million. The increase in Free Cash Flow was due primarily to an increase in net cash flows from operating activities of €229 million as described above.

For a discussion of the limitations associated with using Free Cash Flow rather than IFRS measures and a reconciliation of Free Cash Flow to net cash flows from operating activities, see “Item 3.A. Selected Financial Data.”

Indebtedness

As of December 31, 2019, we have no material outstanding indebtedness, other than lease liabilities recognized upon the adoption of IFRS 16 on January 1, 2019. We may from time to time seek to incur additional indebtedness. Such indebtedness, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions, and other factors. The amounts involved may be material.

On April 3, 2018, the Group completed a direct listing of the Company’s ordinary shares on the NYSE. Upon the direct listing, the outstanding liability relating to the Company’s Convertible Notes was reclassified to equity. See Note 19 to our consolidated financial statements, included elsewhere in this report, for further information regarding the Convertible Notes.

C. Research and Development, Patents and Licenses

For a detailed analysis of research and development costs, see “Item 4.B. Business Overview” and “Item 5. Operating and Financial Review and Prospects”.

D. Trend Information

Our results reflect the effects of our bi-annual trial programs, in addition to seasonal trends in user behavior and, with respect to our Ad-Supported segment, advertising behavior. Historically, Premium Subscriber growth accelerates when we run bi-annual trial

programs in the summer and winter, which typically begin in the last month of the second and fourth quarters. Historically, this has led to decreases in gross margin in the first and third quarter of each year, as we absorb the promotional expenses of discounted trial offers.

For our Ad-Supported segment, typically we experience higher advertising revenues in the fourth quarter of each calendar year due to greater advertising demand during the holiday season. However, in the first quarter of each calendar year, we typically experience a seasonal decline in advertising revenue due to reduced advertiser demand.

Other than as disclosed here and elsewhere in this report, we are not aware of any trends, uncertainties, demands, commitments, or events since December 31, 2019 that are reasonably likely to have a material adverse effect on our revenues, income, profitability, liquidity, or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial conditions.

E. Off-balance sheet arrangements

As of December 31, 2019, we do not have transactions with unconsolidated entities, such as entities often referred to as structured finance or special purpose entities, whereby we have financial guarantees, subordinated retained interests, derivative instruments, or other contingent arrangements that expose us to material continuing risks, contingent liabilities, or any other obligation under a variable interest in an unconsolidated entity that provides financing, liquidity, market risk, or credit risk support to us.

F. Tabular disclosure of contractual obligations

The following table sets forth our contractual obligations and commercial commitments as of December 31, 2019:

Contractual obligations:	Payments due by period				
	Total	Less than 1 year	1-3 years (in € millions)	3-5 years	More than 5 years
Minimum guarantees ⁽¹⁾	1,040	657	383	—	—
Lease obligations ⁽²⁾	1,007	83	163	168	593
Purchase obligations ⁽³⁾	200	56	144	—	—
Total	2,247	796	690	168	593

⁽¹⁾ We are subject to minimum guarantees relating to the content on our service, the majority of which relate to minimum royalty payments associated with our license agreements for the use of licensed content. See “Item 3.D. “Risk Factors”.

⁽²⁾ Included in the lease obligations are short term leases and certain lease agreements that the Group has entered into, but have not yet commenced as of December 31, 2019. Lease obligations relate to our office space. The lease terms are between one and fifteen years. See Note 12 to the consolidated financial statements for further details regarding leases.

⁽³⁾ We are subject to various non-cancelable purchase obligations and service agreements with minimum spend commitments, the majority of which relate to a service agreement with Google for the use of Google Cloud Platform.

Subsequent to the period end, the Group signed license agreements with certain music labels and publishers and podcast agreements with creators. Included in these agreements are minimum guarantee and spend commitments of approximately €186 million over the next three years.

Item 6. Directors, Senior Management and Employees

A. Directors and Senior Management

The following table sets forth the names, ages, and positions of our senior management and directors as of the date of this report:

Name	Age	Position
Daniel Ek	36	Founder, Chief Executive Officer, Chairman, and Director
Martin Lorentzon.....	50	Co-Founder and Director
Paul Vogel.....	47	Chief Financial Officer
Katarina Berg.....	52	Chief Human Resources Officer
Horacio Gutierrez.....	55	Head of Global Affairs & Chief Legal Officer
Alex Norström.....	43	Chief Premium Business Officer
Gustav Söderström	43	Chief Research & Development Officer

Name	Age	Position
Dawn Ostroff.....	59	Chief Content Officer
Cecilia Qvist.....	47	Global Head of Markets
Christopher Marshall	51	Director
Barry McCarthy.....	66	Director
Shishir Mehrotra.....	40	Director
Heidi O'Neill.....	55	Director
Ted Sarandos.....	55	Director
Thomas Staggs.....	59	Director
Cristina Stenbeck.....	42	Director
Padmasree Warrior.....	59	Director

The business address of each Director and each of Mr. Ek, Mr. Lorentzon, Ms. Berg, Mr. Norström, and Mr. Söderström is Regeringsgatan 19, 111 53 Stockholm, Sweden. The business address of each of Ms. Ostroff, Mr. Gutierrez, Ms. Qvist, and Mr. Vogel is 150 Greenwich Street, 63rd Floor, New York, New York 10007. The following is a brief biography of each of our senior managers and directors:

Daniel Ek is our founder, Chief Executive Officer, and Chairman of our board of directors. As our Chief Executive Officer and Chairman, Mr. Ek is responsible for guiding the vision and strategy of the Company and leading the management team. He has been a member of our board of directors since July 21, 2008, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. Prior to founding Spotify in 2006, Mr. Ek founded Advertigo, an online advertising company acquired by TradeDoubler, held various senior roles at the Nordic auction company Tradera, which was acquired by eBay, and served as Chief Technology Officer at Stardoll, a fashion and entertainment community for pre-teens.

Martin Lorentzon is our co-founder and a member of our board of directors. He has been a member of our board of directors since July 21, 2008, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. Mr. Lorentzon previously served as Chairman of our board of directors from 2008 to 2016. In addition to his role on our board of directors, Mr. Lorentzon has served as a member of the board of directors of Telia Company AB (“Telia Company”), Sweden’s main telecom operator, from 2013 to 2018. In 1999, Mr. Lorentzon founded TradeDoubler, an internet marketing company based in Stockholm, Sweden, and initially served as a member of its board of directors. Additionally, Mr. Lorentzon has held senior roles at Telia Company and Cell Ventures. He holds a Master of Science in Civil Engineering from the Chalmers University of Technology.

Katarina Berg is our Chief Human Resources Officer. She oversees all aspects of human resource management and is responsible for developing and executing the people strategy in support of our overall business plan. Ms. Berg serves as a member of the board of directors of Sqore and as member of the advisory board of directors of ToppHälsa, Bonnier Tidskrifter. Before joining our team, Ms. Berg held human resources roles in various multinational companies, such as Swedbank, 3 Scandinavia, and Kanal 5 (SBS Broadcasting). Ms. Berg holds a Master of Arts in Human Resources Management and Development in Behavioral Science from Lund University.

Horacio Gutierrez is our Head of Global Affairs and Chief Legal Officer. In this capacity, he oversees the Company’s work on a wide range of areas around the world, including industry relations and partnerships, public policy and trust and safety, among others, and leads a global team of business, public affairs, government relations, licensing, and legal professionals. Mr. Gutierrez joined Spotify as General Counsel in 2016 after spending over 17 years at Microsoft Corporation, ultimately as General Counsel and Corporate Vice President for Legal Affairs. Throughout his career, he has been involved in a number of high-profile legal and regulatory matters and concluded numerous intellectual property deals, including licensing agreements with companies around the world. Mr. Gutierrez has played a leading role on technology and innovation policy issues, including competition policy, intellectual property policy and internet regulation. He holds a Master of Laws degree from Harvard Law School, which he attended as a Fulbright Scholar; a Juris Doctor degree *summa cum laude* from the University of Miami; a Bachelor of Laws degree from Universidad Católica Andrés Bello in Caracas, Venezuela; and a post-graduate diploma in corporate and commercial law from the same institution.

Alex Norström is our Chief Premium Business Officer. As our Chief Premium Business Officer, Mr. Norström is responsible for overseeing strategy, marketing, global partnerships, and product offerings for our subscription business. Mr. Norström was previously our Vice President of Growth and our Vice President of Subscription. Prior to joining Spotify in 2011, Mr. Norström was Chief New Business Officer at King. He was a member of the board of directors of Circle from 2016 through December 2019. Mr. Norström also has a private investment company, Fragrant Harbour Capital AB, based and registered in Stockholm, Sweden. Mr. Norström holds a Master of Science in Business & Economics with a Major in Finance from the Stockholm School of Economics.

Gustav Söderström is our Chief Research & Development Officer. He oversees the product, design, data, and engineering teams at Spotify and is responsible for our product strategy. Mr. Söderström is a startup seed investor and also has been an advisor to

Tictail since 2013 and was formerly an advisor to 13th Lab (acquired by Facebook's Oculus). Before joining the Company in 2009, Mr. Söderström was director of product and business development for Yahoo! Mobile from 2006 to 2009. In 2003, Mr. Söderström founded Kenet Works, a company that developed community software for mobile phones and served as the company's Chief Executive Officer until it was acquired by Yahoo! in 2006. Mr. Söderström holds a Master of Science in Electrical Engineering from KTH Royal Institute of Technology.

Dawn Ostroff is our Chief Content Officer. She is responsible for overseeing the Company's global content and distribution operations, including all original content and industry and creator relationships. She is also responsible for managing our advertising sales business. Prior to joining Spotify, Ms. Ostroff served as President of Condé Nast Entertainment, a studio and distribution network with entertainment content across film, television, premium digital video, social, and virtual reality. She was previously President of Entertainment for The CW broadcast network, a joint venture of CBS and Warner Bros. that she helped launch in 2006, and before that, President of the UPN broadcast network. Ms. Ostroff holds a Bachelor of Science in Journalism from Florida International University.

Cecilia Qvist is our Global Head of Markets. She oversees the Company's international expansion and product localization efforts and is focused on growth of users globally. Prior to joining Spotify in 2017, Ms. Qvist held business, sales, and product development positions at various companies, including Ericsson, Swedbank, and Nasdaq OMX. She also brings experience in digital strategies and multi-market growth. Since 2018, she has served as a member of the board of directors of Catena Media and a member of the advisory board of Webrock Ventures. Ms. Qvist holds a Master of Business Administration from Heriot-Watt University.

Paul Vogel is our Chief Financial Officer. He is responsible for overseeing the Company's financial affairs. Mr. Vogel previously served as the Company's Head of Financial Planning & Analysis, Treasury and Investor Relations from 2016 to January 2020. Before joining Spotify, he spent the majority of his career in the investment community as a portfolio manager and equity research analyst, most recently serving as a Managing Director and Head of the Internet and Media Equity Research team at Barclays. Prior to Barclays, Mr. Vogel held various roles in finance, including as a Portfolio Manager at AllianceBernstein and a Research Analyst at Morgan Stanley and DLJ. He is a CFA Charterholder and holds a Bachelor of Arts in Economics from the University of Pennsylvania.

Christopher (Woody) Marshall is a member of our board of directors. He has been a member of our board of directors since June 16, 2015, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. In addition to his role on our board of directors, Mr. Marshall currently serves on the boards of directors of a number of private companies. Since 2008, he also has served as a general partner of Technology Crossover Ventures, a private equity firm. Prior to that, Mr. Marshall spent 12 years at Trident Capital, a venture capital firm. Mr. Marshall holds a Bachelor of Arts in Economics from Hamilton College and a Master of Business Administration from the Kellogg School of Management at Northwestern University.

Barry McCarthy is a member of our board of directors. He has been a member of our board of directors since January 8, 2020, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. Mr. McCarthy previously served as our Chief Financial Officer from 2015 to January 2020. Prior to joining Spotify, Mr. McCarthy was a private investor and served as a member of the board of directors of several private companies, including for Spotify from 2014 to 2015. He also has served as a member of the board of directors of Pandora from 2011 to 2013 (Chairman of the audit committee), Eventbrite from 2011 to 2015, and Chegg from 2010 to 2015 (Chairman of the audit committee). Since 2011, Mr. McCarthy also has served as an Executive Adviser to Technology Crossover Ventures. From 1999 to 2010, Mr. McCarthy served as the Chief Financial Officer and Principal Accounting Officer of Netflix. Before joining Netflix, Mr. McCarthy served in various management positions in management consulting, investment banking, and media and entertainment. Mr. McCarthy holds a Bachelor of Arts in History from Williams College and a Master of Business Administration in Finance from the Wharton School at the University of Pennsylvania.

Shishir Mehrotra is a member of our board of directors. He has been a member of our board of directors since June 13, 2017, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. Mr. Mehrotra previously served as our Strategic Advisor to the Chief Executive Officer, from December 2015 to May 2017. Mr. Mehrotra is the CEO and Co-Founder of Coda, Inc. Mr. Mehrotra has previously served as a Vice President of Product and Engineering at Google and Director of Program Management at Microsoft. Mr. Mehrotra holds a Bachelor of Science in Computer Science and a Bachelor of Science in Mathematics from the Massachusetts Institute of Technology.

Heidi O'Neill is a member of our board of directors. She has been a member of our board of directors since December 5, 2017, and her term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. Ms. O'Neill previously served as a member of the board of directors of Skullcandy, where she also was the Chair of the compensation committee, and the Nike School Innovation Fund, of which she was a founding member. Ms. O'Neill also serves as the President of Nike Direct, a division of Nike, Inc.

Ted Sarandos is a member of our board of directors. He has been a member of our board of directors since September 13, 2016, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. In addition to his role on our board of directors, Mr. Sarandos serves on the Film Advisory Board of Directors for Tribeca Film Festival, the board of directors of American Cinematheque, and the advisory board of Film Independent. Mr. Sarandos is also an American Film Institute trustee, an Executive Committee Member of the Academy of Television Arts & Sciences, a Henry Crown Fellow at the Aspen Institute, and serves on the board of directors of Exploring the Arts. He also serves as the Chief Content Officer of Netflix and has led content acquisition for Netflix since 2000.

Thomas Staggs is a member of our board of directors. He has been a member of our board of directors since June 13, 2017, and his term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. In addition to his role on our board of directors, Mr. Staggs serves on the board of overseers of the University of Minnesota Carlson School of Management and the Center for Early Education. He also serves as the Executive Chairman of Vejo, Inc. Mr. Staggs previously served in various roles at The Walt Disney Company, including as Chief Financial Officer, Chairman of Disney Parks and Resorts, Chief Operating Officer, and Special Advisor to the Chief Executive Officer. He also was previously a member of the board of directors at Euro Disney SCA from 2002 until 2015. Mr. Staggs holds a Bachelor of Science in Business from the University of Minnesota and a Master of Business Administration from the Stanford Graduate School of Business.

Cristina Stenbeck is a member of our board of directors. She has been a member of our board of directors since June 13, 2017, and her term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. In addition to her role on our board of directors, Ms. Stenbeck chairs the board of directors of Zalando SE, a German-listed e-commerce company. From 2003 through 2019, Ms. Stenbeck served on the board of directors as main shareholder of Kinnevik AB, a Swedish listed investment group, where she also was Vice Chairman from 2003 to 2007 and Chairman from 2007 to 2016. In addition, she serves on the board of directors of several private companies, including Omio, a Germany-based travel company, and Camshaft S.à.r.l. and Verdere S.à.r.l., two Luxembourg-based investment companies. Ms. Stenbeck previously held board positions in Kinnevik's investee companies, including Millicom International Cellular S.A., Tele2 AB, Modern Times Group AB and Babylon Holdings Ltd. She also chaired a Swedish family foundation Hugo Stenbecks Stiftelse and acted as Trustee for St. Andrew's School in Middletown, Delaware. She holds a Bachelor of Science in Business from Georgetown University.

Padmasree Warrior is a member of our board of directors. She has been a member of our board of directors since June 13, 2017, and her term will expire on the date of the general meeting of shareholders to be held to approve the annual accounts of 2019. In addition to her role on our board of directors, Ms. Warrior serves on the boards of directors of Microsoft and Thorn. In addition, Ms. Warrior was a member of the board of directors of The Gap, Inc. from 2013 to 2016 and a member of the board of directors of Box, Inc. from 2014 to 2016. From 2008 to 2015 Ms. Warrior worked at Cisco, most recently as Chief Technology and Strategy Officer. She served as the President and Chief Executive Officer of NIO U.S. and Chief Development Officer of NIO Group from December 2015 to 2018. In 2019, she founded Fable Group, where she serves as President and Chief Executive Officer. She holds a Bachelor of Technology in Chemical Engineering from the Indian Institute of Technology and a Master of Science in Chemical Engineering from Cornell University.

Family Relationships

There are no family relationships between any of the directors. There are no family relationships between any director and any of the senior management of our Company.

Arrangements or Understandings

Christopher Marshall was elected as a director pursuant to a shareholder arrangement pursuant to his role as a general partner of TCMI, Inc., which manages the TCV funds. Such shareholder arrangement has since been terminated. None of our other senior management, directors, or key employees has any arrangement or understanding with our principal shareholder, customers, suppliers, or other persons pursuant to which such senior management, director, or key employee was selected as such.

B. Compensation

This section discusses the principles underlying the material components of our executive compensation program for a subset of our executive leadership team who would be our named executive officers, as if we were a domestic issuer, and the factors relevant to an analysis of these policies and decisions. These “named executive officers” for 2019 are:

- Daniel Ek, who is our Founder and serves as our Chief Executive Officer (“CEO”), Chairman, and Director and is our principal executive officer;
- Barry McCarthy, who served as our Chief Financial Officer (“CFO”) and our principal financial officer until he resigned from such position as of January 15, 2020;
- Dawn Ostroff, who serves as our Chief Content Officer;
- Gustav Söderström, who serves as our Chief Research & Development Officer; and
- Alex Norström, who serves as our Chief Premium Business Officer.

Specifically, this section provides an overview of our executive compensation philosophy, the overall objectives of our executive compensation program, and each compensation component that we provide. In addition, we explain how and why the remuneration committee of our board of directors arrived at specific compensation policies and decisions involving our named executive officers during 2019.

Each of the key elements of our executive compensation program is discussed in more detail below. Our compensation programs are designed to be flexible and complementary and to collectively serve their principles and objectives.

Executive Compensation Philosophy and Objectives

We operate in the highly competitive and dynamic digital media industry as the world’s most popular global audio streaming subscription service. This industry is characterized by rapidly changing market requirements and the emergence of new competitors. To succeed in this environment, we must continuously develop solutions that meet the needs of our rapidly growing user base in a rapidly changing environment, efficiently develop and refine new and existing products and services, and demonstrate a strong return on investment to our advertisers. To achieve these objectives, we need a highly talented and seasoned team of data scientists, engineers, product designers, product managers, and other business professionals.

We recognize that our future success depends on our continuing ability to attract, develop, motivate, and retain highly qualified and skilled employees, which is driven by our compensation, culture and reputation, and the strength of our brand. We strive to create an environment that is responsive to the needs of our employees, is open towards employee communication and continual performance feedback, encourages teamwork, and rewards commitment and performance. The principles and objectives of our compensation and benefits programs for our executive leadership team and other employees are to:

- attract, engage, and retain the best executives to work for us, with experience and managerial talent enabling us to be an employer of choice in highly competitive and dynamic industries;
- align compensation with our corporate strategies, business and financial objectives, and the long-term interests of our shareholders;
- motivate and reward executives whose knowledge, skills, and performance ensure our continued success; and
- ensure that our total compensation is fair, reasonable, and competitive.

We compete with many other companies in seeking to attract and retain experienced and skilled executives. To meet this challenge, we have embraced a compensation philosophy that offers our executive leadership team competitive compensation and benefits packages including equity grants, which are focused on long-term value creation, and that rewards our executive leadership team for achieving our financial and strategic objectives.

Roles of Our Board of Directors, Remuneration Committee, and Chief Executive Officer in Compensation Decisions

The initial compensation arrangements with our executive leadership team, including the named executive officers, have been determined in arms-length negotiations with each individual executive. Typically, our CEO has been responsible for negotiating these arrangements, except with respect to his own compensation, with the oversight and final approval of the members of our board of directors or the remuneration committee. The compensation arrangements have been influenced by a variety of factors, including, but not limited to:

- our financial condition and available resources;
- our need for that particular position to be filled;
- our board of directors' evaluation of the competitive market based on the third-party data provided by Compensia, Inc. ("Compensia"), a national compensation consulting firm, competitive pay practices for comparable positions at companies of comparable scale and in relevant business segments, as further described below, and the experience of the members of the remuneration committee with other companies;
- the length of service of an individual; and
- the compensation levels of other members of the executive leadership team, each as of the time of the applicable compensation decision.

Following the establishment of the initial compensation arrangements, our CEO, board of directors, and remuneration committee have been responsible for overseeing our executive compensation program, as well as determining and approving the ongoing compensation arrangements for our CEO and other members of the executive leadership team, including the other named executive officers. Typically, our CEO reviews the performance of the other members of the executive leadership team, including the other named executive officers, and based on this review, along with the factors described above, make recommendations to the remuneration committee with respect to the total compensation, including each individual component of compensation, of these individuals for the coming year. There is no predetermined time of year for these reviews, although they are generally performed on an annual basis coinciding with our Company-wide employee compensation review in March. Further, the remuneration committee reviews the performance of our CEO, and based on this review and the factors described above, determines his total compensation for the coming year.

The current compensation levels of our executive leadership team, including the named executive officers, primarily reflect the varying roles and responsibilities of each individual.

Engagement of Compensation Consultant

The remuneration committee has engaged the services of Compensia to provide executive compensation advisory services. The remuneration committee directed Compensia to develop a peer group of comparable companies in our sector and prepare a competitive market analysis of our executive compensation program to assist it in determining the appropriate level of overall compensation, as well as assess each separate component of compensation, with the goal of understanding the competitiveness of the compensation we offer to our executive leadership team. In 2018, the remuneration committee approved the compensation peer group (the "Peer Group") for fiscal year 2019. The Peer Group for 2019 consisted of the following companies:

Activision Blizzard	Autodesk	Ctrip.com International	Discovery
eBay	Electronic Arts	Expedia Group	IAC/InterActiveCorp
Intuit	Lions Gate Entertainment	Live Nation Entertainment	MercadoLibre
PayPal Holdings	Sirius IX Holdings	Snap	Take-Two Interactive
Twitter	VeriSign	Zalando	Zillow Group

The remuneration committee bases its executive compensation decisions, at least in part, by reference to the compensation of the executives holding comparable positions at this group of comparable peer companies, as it may be adjusted from time to time. In 2018, Compensia provided the remuneration committee with total cash compensation data and total compensation data (including cash compensation and equity compensation) at various percentiles within the Peer Group. The remuneration committee considered this data in determining the compensation levels of our named executive officers, but we did not benchmark our executive compensation to any pre-determined target percentile of market. The remuneration committee sought to compensate our named executive officers at a level that would allow us to successfully recruit and retain the best possible talent for our executive leadership team. Overall, Compensia's analysis of our Peer Group indicated that the target total cash compensation for our named executive officers was approximately the 25th percentile of our Peer Group. Our total compensation for our named executive officers other than our CEO (who, as we note below, did not receive any cash or equity compensation in 2019), including cash and equity compensation, was between the 50th and 75th percentile of our Peer Group. As noted above, we rely heavily on our equity awards to incentivize our employees, including each of our named executive officers.

Compensation Philosophy

We design the principal components of our executive compensation program to fulfill one or more of the principles and objectives described above. Compensation of our named executive officers consists of the following elements:

- base salary;
- equity incentive compensation;
- certain severance benefits;
- retirement savings plans; and
- health and welfare benefits and certain limited perquisites and other personal benefits.

We offer cash compensation in the form of base salaries that we believe appropriately reward our executive leadership team members for their individual contributions to our business. We have opted not to offer annual cash bonuses to our executive leadership team members, as we believe they do not incentivize the long-term growth of the Company. Instead, we incentivize our executive leadership team members heavily through share-based compensation, which we believe fosters the long-term growth of the Company.

We have emphasized the use of equity to incentivize our executive leadership team to focus on the growth of our overall enterprise value and, correspondingly, the creation of value for our shareholders. As a result of this compensation practice, we have tied a greater percentage of each executive leadership team member's total compensation to shareholders returns and kept cash compensation at modest levels, while providing the opportunity to be well-rewarded through equity if we perform well over time.

Except as described below, we have not adopted any policy or guidelines for allocating compensation between currently-paid and long-term compensation, between cash and non-cash compensation, or among different forms of non-cash compensation.

Each of the primary elements of our executive compensation program is discussed in more detail below. We believe that, as a part of our overall executive compensation policy, each individual element serves our objectives described above.

Executive Compensation Program Components

The following describes the primary components of our executive compensation program for each of our named executive officers, the rationale for that component, and how compensation amounts are determined.

Base Salary and Bonus

Generally, each named executive officer's initial base salaries were established through arms-length negotiation at the time the individual was hired, taking into account his or her qualifications, experience, and prior salary level. Thereafter, the base salaries of our executive leadership team members, including the named executive officers, are reviewed periodically by our remuneration committee, and adjustments are made as deemed appropriate. There were no base salary increases in 2019.

As of July 1, 2017, our CEO does not receive a base salary. In 2017, he was entitled to receive a one-time bonus subject to the fulfillment of certain milestones and/or discretionary approval by our board of directors. The board of directors decided to grant our CEO such a bonus with respect to fiscal year 2017 in an amount up to \$1,000,000, which became payable in the first quarter of 2018. The board of directors considered whether the Company achieved (i) more than 70,000,000 Premium Subscribers in 2017, (ii) more than 150,000,000 MAUs in 2017, and (iii) 25% in gross margin during the second half of 2017 in determining the bonus amount, but our board of directors retained the ability to pay such bonus to Mr. Ek even if such milestones were not achieved. In February 2018, our board of directors determined to pay Mr. Ek the full \$1,000,000 bonus based on the Company's 2017 performance though certain performance goals were not achieved. Mr. Ek did not receive a bonus for 2018 or 2019.

As of the end of fiscal year 2019, our named executive officers were entitled to the following annual base salaries:

Named Executive Officer	Annual Base Salary
Daniel Ek ⁽¹⁾⁽²⁾	\$ 0
Barry McCarthy	\$ 560,000
Dawn Ostroff	\$ 1,000,000
Gustav Söderström ⁽²⁾	\$ 320,514
Alex Norström ⁽²⁾	\$ 333,335

⁽¹⁾ As of July 1, 2017, Mr. Ek does not receive a base salary.

⁽²⁾ Messrs. Ek, Söderström, and Norström are each paid in Swedish Krona. Such amounts are based on the exchange rate of SEK 9.36 per dollar as of December 31, 2019 as published by Reuters.

We offered Ms. Ostroff a sign-on bonus of \$2,000,000 in order to incentivize her to join the Company. Pursuant to her employment agreement, Ms. Ostroff received the first installment of her sign-on bonus in July 2018 and the second installment of her sign-on bonus in July 2019. For further information on Ms. Ostroff's sign-on bonus please see "—Employment Agreements" below. None of the other named executive officers were entitled to any bonuses or cash incentive compensation for 2019.

Long-Term Incentives

Each of our named executive officers has been granted equity awards in the Company, which allow them to share in the future appreciation of the Company, subject to certain vesting conditions, as described in more detail below. These equity awards are designed to foster a long-term commitment to us by our named executive officers, provide a balance to the salary component of our compensation program, align a portion of our executives' compensation to the interests of our shareholders, promote retention, and reinforce our pay-for-performance structure (as discussed in more detail below).

Long-term incentive awards are provided upon hire as well as during employment at the Company's discretion.

In 2019, we established a new incentive mix program, which provides our named executive officers as well as all other permanent employees with maximum flexibility and individual autonomy, by allowing our employees to have the ability to choose their own composition of long-term incentive awards. Employees are informed of their intended aggregate dollar amount of long-term incentive compensation, and they can allocate such dollar amount among at-the-money stock options, out-of-the-money stock options with a closing price equal to 150% of the closing price per ordinary share on the grant date, RSUs, or cash. Employees can choose to have one or two types of equity awards and/or cash and can mix their programs in portions of 25%, 50%, and 75%. The amount of any cash award chosen will be 90% of the dollar amount the employee allocates to cash. The number of RSUs provided is equal to the dollar amount the employee allocates to RSUs divided by the closing price per ordinary share on the grant date. The number of at-the-money options provided is equal to four times the dollar amount the employee allocates to such stock options divided by such closing price. The number of out-of-the-money stock options provided is equal to eight times the dollar amount the employee allocates to stock options divided by such closing price. Each type of long-term incentive award vests on the same schedule: 3/48ths of the equity award and/or cash payment vests on the third calendar month following the date of grant, and thereafter 1/48th of the equity award and/or cash payment vests on the first day of each calendar month. For further information on our equity award programs please see "—Stock Options", "—Restricted Stock Units" and "—Cash Program" below.

In 2019, each of our named executive officers participated in the incentive mix program. The following table shows the dollar amount of incentive compensation allocated to each named executive officer, as well as the allocations chosen by each such individual:

Named Executive Officer	Aggregate Long-Term Incentive Award Dollar Value (\$)	2019 At-the-Money Stock Option Allocation (#)	2019 Out-of-the-Money Stock Option Allocation (#)	2019 RSU Allocation (#)	2019 Cash Allocation (\$)
Barry McCarthy	5,900,000	171,014	—	—	—
Dawn Ostroff	5,300,000	38,406	—	28,804	—
Gustav Söderström	5,900,000	171,014	—	—	—
Alex Norström	5,300,000	153,623	—	—	—

Long-Term Incentive Award Decisions

Each year our remuneration committee reviews and recommends an equity program to our board of directors for approval in order to incentivize our employees, including our named executive officers, and directors. Our remuneration committee, in consultation with our CEO, determines the aggregate dollar value of the long-term incentive compensation to be awarded to each executive leadership team member. In making these decisions, the remuneration committee takes into consideration the Company's financial results and market conditions, as well as the factors described above.

Retirement Savings and Other Benefits

Our retirement programs comply with local laws and regulations. For our employees who reside in Sweden, including Messrs. Ek, Söderström, and Norström, we participate in an occupational pension plan. Pursuant to such plan we pay a premium of 4.5% of each such employee's monthly base salary up to an annual income ceiling and 30% of monthly base salary on amounts above such annual income ceiling. Employees also may contribute additional amounts through a salary exchange program pursuant to which eligible employees are given the opportunity to enhance their pension savings by choosing to exchange a portion of their base salary for additional pension contributions. Certain legal limitations apply to the amount of contributions that may be made to the occupational pension plan.

For our employees in the United States who satisfy certain eligibility requirements, including Mr. McCarthy and Ms. Ostroff, we have established a 401(k) retirement savings plan. Under the 401(k) plan, eligible employees may elect to reduce their current compensation by up to the prescribed annual limit and contribute these amounts to the 401(k) plan. The Company matches up to 50% of the employee's contributions up to 6% of their annual salary. Employees vest in the employer-contributions ratably over four years.

The Company does not maintain any defined benefit plans for any of its named executive officers.

Employee Benefits and Perquisites

Additional benefits received by our Swedish employees, including Messrs. Ek, Söderström, and Norström, include private healthcare, accident insurance, life and long-term disability insurance, travel insurance, and parental leave. Additional benefits received by our U.S. employees, including Mr. McCarthy and Ms. Ostroff, include medical, dental, and vision benefits, medical, and dependent care flexible spending accounts, short-term and long-term disability insurance, basic life insurance coverage, and parental leave. These benefits are provided to our named executive officers on the same general terms as they are provided to all of our full-time employees in the applicable countries.

We design our employee benefits programs to be affordable and competitive in relation to the market, as well as compliant with applicable laws and practices. We adjust our employee benefits programs as needed based upon regular monitoring of applicable laws and practices in the competitive market.

We do not view perquisites or other personal benefits as a significant component of our executive compensation program. We generally provide relocation assistance to all of our employees, when applicable. We provided Mr. McCarthy with relocation assistance and tax preparation assistance in connection with his relocation. In addition, the personal safety of our employees, including our NEOs, is of the highest importance to us and in 2019 we paid for personal security services for certain NEOs pursuant to the Company's personal security program for senior management. Although we consider these personal security services to be appropriate and necessary for the reasons described above, the costs related to such services are reported as other compensation to our NEOs in the "Summary Compensation Table" below. In the future, we may provide other perquisites or other personal benefits in limited circumstances, such as where we believe it is appropriate to assist an individual executive officer in the performance of his or her duties, to make our executive leadership team members more efficient and effective, and for recruitment, motivation, or retention purposes. All future practices with respect to perquisites or other personal benefits for our named executive officers will be approved and subject to periodic review by the remuneration committee. We do not expect these perquisites to be a significant component of our compensation program.

Severance

Each of our named executive officers is entitled to severance upon certain qualifying terminations. For further information on such amounts please see "—Employment Agreements" below.

Employment Agreements

We have, or one of our subsidiaries has, entered into employment agreements with Messrs. Ek, McCarthy, Norström, and Söderström, and Ms. Ostroff. We currently do not have employment agreements or other service contracts with any members of our board of directors, except for Mr. Ek.

In 2011, Mr. Ek entered into a new employment agreement that replaced his prior agreement. The employment agreement provides for an indefinite term that automatically expires upon Mr. Ek's retirement at age 65. The agreement provides for a fixed monthly salary, although the board of directors determined that, commencing July 1, 2017, Mr. Ek would no longer receive an annual salary. The Ek Agreement also provides for a six-month notice period prior to termination, though we may terminate the agreement with immediate effect if Mr. Ek has grossly neglected his obligations or otherwise materially breached the contract. In the event of termination of employment by us (other than due to gross neglect), in addition to pay during the notice period, Mr. Ek also will be

entitled to a severance payment equal to six times his monthly salary, less any income from future employment, payable in monthly installments following termination.

Mr. Ek's employment agreement contains post-termination non-competition covenants that we could choose to enforce for 12 months following any type of termination of employment, except termination by us due to any reason other than breach of contract by Mr. Ek. In consideration for the non-competition covenant, we will pay Mr. Ek, in monthly installments during his restricted period, 12 times his monthly salary, less any income from future employment, in an amount up to 60% of Mr. Ek's monthly salary. Such payment will not be made during any period Mr. Ek is otherwise receiving severance pay from us or if Mr. Ek's employment ceases as a result of retirement or termination by us due to Mr. Ek's breach of contract. If we decide not to enforce the non-competition covenant, the corresponding payment obligation would also cease. Mr. Ek's employment agreement also includes employee and customer non-solicitation clauses that will apply for 12-months post-termination and that do not require us to pay any additional consideration.

In October 2016, Mr. McCarthy entered into a new employment agreement that replaced his prior agreement (the "McCarthy Agreement"). The agreement provided for an indefinite employment period. The agreement also provided for a base salary, participation in our benefit plans, and total target compensation of \$5,000,000. The employment agreement provided that we could terminate Mr. McCarthy's employment without "Cause" (as defined in the agreement) upon three months' notice. In addition, upon a termination without Cause, Mr. McCarthy would have been entitled to a severance amount equal to his base salary for six months and subsidized health benefits for six months. If Mr. McCarthy's employment were terminated within 12 months after a change in control of the Company, or if he were required to perform duties that are materially inconsistent with those normally performed by him or is otherwise constructively dismissed following the change in control, he would have been entitled to receive a lump sum severance payment of 12 months' salary and subsidized health benefits. Mr. McCarthy also is subject to a nine-month post-termination non-competition covenant (with such period commencing on the last day of the notice period) and a two-year post-termination non-solicitation covenant.

Mr. McCarthy retired effective as of January 15, 2020. He did not enter into a separation agreement or any similar arrangement in connection with his resignation.

In 2017, each of Messrs. Norström, and Söderström entered into revised employment agreements (the "2017 Agreements") that provide substantially similar terms to the terms described above for the McCarthy Agreement, except that the 2017 Agreements do not provide for a specified total target compensation and their non-competition periods commence on the first day of their respective notice periods rather than the last day.

Effective July 2018, we entered into an employment agreement with Ms. Ostroff providing for her employment as our Chief Content Officer (the "Ostroff Agreement"). The Ostroff Agreement provides for substantially similar terms to the terms described above for the 2017 Agreements, except that the Ostroff Agreement provides for a signing bonus of \$2,000,000, payable in two equal installments on the date Ms. Ostroff's first base salary payment is made and on the 12-month anniversary of such date, respectively. Payment of each installment is subject to Ms. Ostroff's continued employment through the 12-month period following the applicable installment payment date. If Ms. Ostroff's employment is terminated during either such 12-month period, she will be required to repay the amount received on the applicable installment payment date, prorated for the number of fully completed months of employment during such 12-month period.

For further information on the post-termination treatment of our equity awards, please see "—Stock Options" and "—Restricted Stock Units" below.

C. Board Practices

Board of Directors Structure

Our board of directors currently consists of ten directors and is composed of Class A and Class B directors. Our articles of association provide that the board of directors must be composed of at least three members. Each director holds office for the term decided by the general meeting of the shareholders, but not exceeding six years, or until his or her successor has been appointed. For more information on the date of expiration of each director's term and the length of time each director has served, see "Item 6.A. Directors and Senior Management." Our directors may be removed at any time, with or without cause, by a resolution of the shareholders' meeting. See "Item 10.B. Memorandum and Articles of Association—Board of Directors."

Remuneration Committee

Our board of directors has established a remuneration committee. Our remuneration committee consists of Christopher Marshall, Martin Lorentzon, and Shishir Mehrotra. Mr. Marshall is the chair of our remuneration committee. Our remuneration committee has the following responsibilities, among others:

- reviewing and making recommendations to our board of directors related to our incentive-compensation plans and equity-based plans;
- establishing and reviewing the overall compensation philosophy of the Company;
- reviewing and approving total compensation for our chief executive officer and other executive officers;
- reviewing and making recommendations regarding the compensation to be paid to our non-employee directors;
- selecting and retaining a compensation consultant; and
- such other matters that are specifically delegated to the remuneration committee by our board of directors from time to time.

Audit Committee

Our board of directors has established an audit committee that consists of Christopher Marshall, Thomas Staggs, and Padmasree Warrior. Thomas Staggs is the chair of our audit committee. All audit committee members satisfy the “independence” requirements set forth under the rules of the NYSE and in Rule 10A-3 under the Exchange Act. Our audit committee has the following responsibilities, among others:

- appointing and replacing our independent registered public accounting firm, subject to shareholder approval;
- retaining, compensating, evaluating, and overseeing the work of our independent registered public accounting firm;
- reviewing with our independent registered public accounting firm any difficulties or material audit issues and the Company’s response to any management letters provided by the independent registered public accounting firm;
- discussing the annual audited financial statements and quarterly financial statements with management and our independent registered public accounting firm;
- reviewing and evaluating the Company’s enterprise risk management, including the Company’s data protection and cybersecurity programs; and
- such other matters that are specifically delegated to our audit committee by our board of directors from time to time.

D. Employees

In 2019, 2018, and 2017, we had 4,405, 3,651, and 2,960 full-time employees on average, respectively. The following table describes our average number of employees by department per fiscal year:

	December 31,			% Change	
	2019	2018	2017	2019 vs. 2018	2018 vs. 2017
Content Production and Customer Service	371	236	206	57%	15%
Sales and Marketing	1,192	1,016	865	17%	17%
Research and Development	2,094	1,846	1,463	13%	26%
General and Administrative	748	553	426	35%	30%

The following table describes our average number of employees by geographic location:

	December 31,		
	2019	2018	2017
United States	2,121	1,708	1,348
Sweden	1,437	1,280	1,087
United Kingdom	353	273	217

Additionally, for the years ended December 31, 2019, 2018, and 2017, we had an average of approximately 494, 390, and 308 employees, respectively, in the aggregate in Argentina, Australia, Belgium, Brazil, Canada, Colombia, Denmark, Finland, France, Germany, Hong Kong, India, Italy, Japan, Mexico, Netherlands, Norway, Poland, Russia, Singapore, Spain, Taiwan, Turkey, and

United Arab Emirates. From time to time, we have engaged temporary employees to fill open positions. We are not a signatory to any labor union collective bargaining agreement. As of December 31, 2019, 42 employees of Gimlet, a wholly-owned indirect subsidiary of the Company, were represented by the Writer’s Guild of America-East labor union. Collective bargaining has commenced, but an agreement has not been reached.

E. Share Ownership

The following table provides information regarding share ownership by our officers and directors as of December 31, 2019.

Name of Beneficial Owner	Number of Shares Owned	Approximate Percentage of Outstanding Ordinary Shares	Number of Shares Underlying Options	Option Exercise Price (\$)	Option Expiration Date	Restricted Stock Units	Warrants	Subscription Price (\$)
Daniel Ek ⁽¹⁾	32,079,648	17.4%	65,480	\$ 42.18	3/31/2021	—	1,600,000	89.73
	—	—	—	—	—	—	800,000	190.09
Martin Lorentzon ⁽²⁾	22,375,278	12.1%	18,602	\$ 219.33	6/28/2024	3,617	—	—
Barry McCarthy ⁽³⁾	168,069	*	530,600	\$ 43.73	3/31/2020	—	—	—
	—	—	200,960	\$ 41.20	3/31/2021	—	—	—
	—	—	90,080	\$ 50.70	3/31/2022	—	—	—
	—	—	145,360	\$ 123.13	3/31/2023	—	—	—
	—	—	171,014	\$ 138.00	3/1/2024	—	—	—
Katarina Berg	14,424	*	56,400	\$ 50.70	3/31/2022	6,624	—	—
	—	—	43,600	\$ 123.13	3/31/2023	—	—	—
	—	—	32,609	\$ 138.00	3/1/2024	—	—	—
Alex Norström	1,640	*	225,600	\$ 50.70	3/31/2022	—	—	—
	—	—	130,800	\$ 123.13	3/31/2023	—	—	—
	—	—	153,623	\$ 138.00	3/1/2024	—	—	—
Dawn Ostroff	—	*	133,745	\$ 180.12	3/31/2023	23,403	—	—
	—	—	38,406	\$ 138.00	3/1/2024	—	—	—
Cecilia Qvist	—	*	33,000	\$ 78.25	3/31/2022	—	—	—
	—	—	12,000	\$ 123.13	3/31/2023	—	—	—
	—	—	32,609	\$ 138.00	3/1/2024	—	—	—
	—	—	21,739	\$ 207.00	3/1/2024	—	—	—
Gustav Söderström	5,920	*	25,240	\$ 42.48	3/31/2020	—	—	—
	—	—	35,560	\$ 42.18	3/31/2021	—	—	—
	—	—	193,280	\$ 50.70	3/31/2022	—	—	—
	—	—	145,360	\$ 123.13	3/31/2023	—	—	—
	—	—	171,014	\$ 138.00	3/1/2024	—	—	—
Christopher Marshall ⁽⁴⁾	25,989	*	4,651	\$ 146.22	6/28/2024	5,377	—	—
	—	—	9,301	\$ 219.33	6/28/2024	—	—	—
Shishir Mehrotra	102,326	*	13,952	\$ 219.33	6/28/2024	4,198	—	—
Heidi O’Neill	2,126	*	2,325	\$ 146.22	6/28/2024	4,721	—	—
Ted Sarandos	7,426	*	4,651	\$ 146.22	6/28/2024	5,417	—	—
	—	—	9,301	\$ 219.33	6/28/2024	—	—	—
Thomas Staggs ⁽⁵⁾	33,836	*	7,386	\$ 146.22	6/28/2024	4,322	—	—
Cristina Stenbeck	2,766	*	4,651	\$ 219.33	6/28/2024	5,361	—	—
Padmasree Warrior	2,766	*	4,651	\$ 219.33	6/28/2024	3,617	—	—

* Represents beneficial ownership of less than 1%.

⁽¹⁾ Includes 15,447,679 ordinary shares held by D.G.E. Investments Limited (“D.G.E. Investments”). Mr. Ek is the sole shareholder of D.G.E. Holding Limited (“D.G.E. Holding”), which is the sole shareholder of D.G.E. Investments. Also includes 4,276,200 ordinary shares held by Tencent Music Entertainment Hong Kong Limited (“TME Hong Kong”), 9,076,240 ordinary shares held by Image Frame Investment (HK) Limited (“Image Frame”), 3,227,920 ordinary shares held by Tencent Mobility Limited, and 51,609 ordinary shares held by Distribution Pool Limited. Mr. Ek exercises voting power over the ordinary shares held by TME Hong Kong, Image Frame, Tencent Mobility Limited, and Distribution Pool Limited through his indirect ownership of D.G.E. Investments, which holds an irrevocable proxy with regard to these ordinary shares. As such, Mr. Ek may be deemed to share beneficial ownership of the ordinary shares held by TME Hong Kong, Image Frame, Tencent Mobility Limited, and Distribution Pool Limited. Additionally, each of D.G.E. Holding and Mr. Ek may be deemed to share

beneficial ownership of the ordinary shares held by D.G.E. Investments. The business address of D.G.E. Holding is Office 101, Omega Business Center, 18 Stratigou Temagia Avenue, 6047 Larnaca, Cyprus.

- (2) Includes 22,372,512 ordinary shares held by Rosello Company Limited (“Rosello”). Mr. Lorentzon is the sole shareholder of Amaltea S.à r.l. (“Amaltea”), which is the sole shareholder of Rosello. As such, each of Amaltea and Mr. Lorentzon may be deemed to share beneficial ownership of the ordinary shares held by Rosello. The business address of Rosello is 22 Stasikratous Street, Office 001, 1065 Nicosia, Cyprus.
- (3) Includes 142,680 ordinary shares held by Rivers Cross Trust, an entity wholly owned by Mr. McCarthy. The business address of Rivers Cross Trust is 3875 Woodside Rd, Woodside, CA 94062.
- (4) Includes (i) 12,707 ordinary shares held by Marshall Carroll 2000 Trust; (ii) 173 ordinary shares held by Marshall Partners; (iii) 13,109 shares of stock held by Mr. Marshall for the benefit of TCV VII Management, L.L.C. (“TCV VII Management”) and TCV VIII Management, L.L.C. (“TCV VIII Management”); (iv) 13,952 non-qualified stock options held by Mr. Marshall for the benefit of TCV VII Management and TCV VIII Management; and (v) 5,377 ordinary shares issuable upon vesting of RSUs held by Mr. Marshall for the benefit of TCV VII Management and TCV VIII Management. Mr. Marshall is a trustee of the Marshall Carroll 2000 Trust and a general partner of Marshall Partners. Mr. Marshall disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. Mr. Marshall and the other members of TCV VII Management and TCV VIII Management (collectively, the “Management Members”) may be deemed to have the shared power to dispose or direct the disposition of the 13,109 ordinary shares, the 13,952 non-qualified stock options, and the 5,377 ordinary shares issuable upon vesting of the RSUs held by Mr. Marshall. The Management Members disclaim beneficial ownership of the ordinary shares and the ordinary shares issuable upon vesting of non-qualified stock options and RSUs, except to the extent of their respective pecuniary interest therein.
- (5) Includes 31,040 ordinary shares held by the Staggs Trust, a revocable inter-vivos trust established by Mr. Staggs and his spouse. The business address of the Staggs Trust is 9665 Wilshire Blvd., Suite 525, Beverly Hills, CA 90212.

Stock Options

As noted above, we have granted stock options to our employees, including as part of the incentive mix program implemented in 2019. Each stock option represents the right to purchase one of our ordinary shares. Each year, we adopt a new stock option program for a one-year term; however, in 2019, we adopted two stock option programs, an interim 2019 plan (the “Interim 2019 Plan”) and the 2019 plan (the “2019 Plan”). Pursuant to the recent stock option programs, each participant is granted a stock option at a specified exercise price. Since January 1, 2016, the exercise prices have been set at fair market value. Of each grant made prior to 2019 and each grant made pursuant to the Interim 2019 Plan, 3/16ths of the total number of options granted vests on the first of any of March 1, June 1, September 1, or December 1 falling more than three months from the date of grant (except for grants made prior to 2017 in Australia for which 5/16 vests on the first of March 1, June 1, September 1, or December 1 after 12 months from the date of grant), and thereafter 1/16 vests on each March 1, June 1, September 1, and December 1 thereafter, subject to continued employment. As noted above, of each grant made pursuant to the 2019 Plan as part of the incentive mix program, 3/48ths of the total number of options granted vested on the third calendar month following the date of grant, and thereafter 1/48th of the total number of options granted vests on the first day of each calendar month thereafter, subject to continued employment. The options granted prior to 2019 and granted pursuant to the Interim 2019 Plan expire on March 31 of the fifth year following the date of grant. The options granted under the 2019 Plan expire on the fifth anniversary of the date of grant. Initially, vested options were only exercisable annually during a 30-day exercise window, for a period of time immediately following the optionee’s termination and upon the expiration of the term of the option. In 2016, we amended our stock option program to provide that vested options could be exercised during each March, June, September, and December prior to the expiration of the term of the option. We later further amended our stock option program in 2017 to provide that vested options may be exercised at any time prior to the expiration of the option term. For our employees in certain countries, upon the exercise of a stock option, the Company is required to pay a social security contribution in an amount equal to the spread value of the option multiplied by the applicable tax rate.

Upon the termination of an optionee’s employment for any reason, all unvested options held by the optionee will generally be immediately forfeited. However, for certain employees, including the named executive officers, upon termination of an optionee’s employment (i) by the Company for any reason other than Cause or (ii) by the optionee due to the Company’s material breach of the optionee’s employment agreement, a portion of unvested options will immediately vest. The portion of unvested options that will accelerate and vest ranges from six to twelve months’ worth of unvested options, depending on the optionee. If the optionee resigns; if we terminate the optionee’s employment other than as a result of death, disability or “Cause” (as defined in the applicable option plan); or if the optionee retires, the optionee’s vested options will remain exercisable for 90 days following such termination. If the optionee’s termination of employment occurs due to death or disability, the vested options will remain exercisable for 194 days following termination. In either case, the option will no longer be exercisable after the expiration date. Upon termination for Cause, vested options will immediately be forfeited. We also may cancel an optionee’s options upon the optionee’s commission of a material breach of the terms and conditions governing the options.

The board of directors may provide for a new exercise period upon a change in control. If the board of directors sets a new exercise period, 50% of each holder’s unvested options will accelerate and vest. Following such acceleration, the board of directors may choose to allow the unvested options to continue to vest or lapse. For the plans prior to 2018 and the Interim 2019 Plan, if the board allows the unvested options to continue vesting, 1/8th of the unvested options will vest on the first cliff vesting date as described above, and 1/32nd of the remaining options will vest each quarter thereafter. For the 2019 Plan, if the board allows the unvested options to continue vesting, 3/96th of the unvested options will vest after the first cliff vesting date as described above, and 1/96th of the remaining options will vest on each subsequent regularly scheduled vesting occasion. If we or our successor terminates an optionee’s employment without Cause within six months following a transaction constituting a change in control, any unvested stock

options held by the optionee will vest as of such termination. In addition, for certain employees, including the named executive officers, if within six months following a change in control, such employee (i) resigns because he or she is required to perform duties that are materially inconsistent with the ones normally performed by someone in such position or (ii) otherwise experiences a constructive termination, any unvested stock options held by the employee will vest as of such resignation. The plans provide for other potential adjustments to the stock options in the event of corporate transactions.

We also maintain an option program for former employees of The Echo Nest Corporation who are not members of the executive leadership team, which options we assumed in connection with the acquisition of The Echo Nest Corporation.

Restricted Stock Units

As noted above, we have granted RSUs to our employees, including as part of the incentive mix program implemented in 2019. Each RSU represents the right to receive one of our ordinary shares. With respect to RSUs granted prior to 2018, one-fifth of each grant of RSUs time-vests on each September 1, commencing on the September 1 falling more than three months from the date of grant and subject to the holder's continued employment with us. In addition to time-vesting, one of the following events or dates also has to occur in order for such RSUs granted prior to 2018 to fully vest: (i) the six-month anniversary of an initial public offering, (ii) a change in control, and (iii) September 1 of the third year following the date of grant, subject to the holder's continued employment through such date. If one of such events or dates occurs prior to final time-vesting of an award of RSUs, then the RSUs will continue to be subject to time-vesting following such event or date, and will fully vest upon the final time-vesting date. RSUs granted in 2018 fully vest on each of the first five anniversaries of the date of grant, subject to the holder's continued employment with us. As described above, for RSUs granted in 2019 as part of the incentive mix program, 3/48ths of the total number of RSUs granted vested on the third calendar month following the date of grant, and thereafter 1/48th of the total number of RSUs granted vests on the first day of each calendar month thereafter, subject to continued employment. For certain employees, including the named executive officers, upon termination of an optionee's employment (i) by the Company for any reason other than Cause or (ii) by the optionee due to the Company's material breach of the optionee's employment agreement, a portion of the individual's unvested RSUs will immediately vest. The portion of unvested RSUs that will accelerate and vest will be equal to the number of such RSUs that would have otherwise vested between six and 12 months following the termination, depending on the optionee. In addition, for certain employees, including the named executive officers, if within six months following a change in control, the individual (i) resigns because he or she is required to perform duties that are materially inconsistent with the ones normally performed by someone in such position or (ii) otherwise experiences a constructive termination, all of the individual's outstanding unvested RSUs will accelerate and vest.

For our employees in certain countries, upon vesting of an RSU, the Company is required to pay a social security contribution in an amount equal to the profit an employee realizes upon vesting multiplied by the applicable tax rate. The RSUs are settled in ordinary shares on or as soon as reasonably practicable (but no later than 30 days) following full vesting.

The plans provide for other potential adjustments to the RSUs in the event of corporate transactions. If the holder commits a material breach of the terms and conditions governing RSUs, we may cancel the unvested RSUs. All unvested RSUs will be forfeited upon any termination of employment.

On certain occasions we also grant RSUs to individuals who become employees through acquisitions, with varying vesting schedules.

Cash Program

As noted above, we also offer cash retention awards as part of our incentive mix program to all permanent employees. Pursuant to the cash alternative of the incentive mix program, the named executive officers who choose to include cash in their incentive mix composition will receive a fixed cash payment upon each vesting date. As noted above, for the cash awards granted in 2019, 3/48ths of the cash payment vested on the third calendar month following the date of grant, and thereafter 1/48th of the cash payment granted vests on the first day of each calendar month thereafter, subject to continued employment.

Restricted Stock

In connection with an acquisition in 2017, we issued restricted stock to certain employees of the target. Of each such grant of restricted stock, one-third vested in 2019, on the second anniversary of the closing of such transaction, and the remaining two-thirds will vest on the third anniversary of such closing, subject, in each case, to the employee's continued employment through such vesting date. The award agreement provides for potential adjustments to the restricted stock in the event of corporate transactions. Upon certain terminations prior to an applicable vesting date, we have the right, but not the obligation, to acquire the unvested restricted stock at an agreed upon price per share.

Other Contingently Issuable Shares

In connection with an acquisition in 2019, we issued equity instruments to certain employees of the target. Of each such grant of equity instruments, one-fourth will vest on each anniversary of the closing of such transaction until fully vested, subject, in each case, to the employee's continued employment through such vesting date. The agreement provides for potential adjustments to the equity instrument in the event of corporate transactions.

Warrants

On October 17, 2016, Mr. Ek purchased, through D.G.E. Investments, an entity indirectly wholly owned by him, 3,200,000 non-compensatory warrants in the Company, pursuant to a subscription agreement. Each warrant was purchased for \$5.76. The terms and conditions for the warrants provide that D.G.E. Investments may purchase the ordinary shares underlying the warrants for \$50.61 per share at any time prior to October 17, 2019. On October 4, 2019, the Company issued 1,600,000 ordinary shares and 16,000,000 beneficiary certificates to Mr. Ek, through D.G.E. Investments, upon the exercise of 1,600,000 warrants that were granted on October 17, 2016, for cash of €74 million. On October 17, 2019, the Company issued 905,285 ordinary shares and 9,052,850 beneficiary certificates to Mr. Ek, through D.G.E. Investments, upon the effective net settlement of the remaining 1,600,000 warrants that were granted on October 17, 2016.

On July 13, 2017, Mr. Ek purchased, through D.G.E. Investments, 1,600,000 non-compensatory warrants in the Company, pursuant to a subscription agreement. Each warrant was purchased for \$6.23, the then-current fair market value per share. The terms and conditions for the warrants provide that D.G.E. Investments may purchase the ordinary shares underlying the warrants for \$89.73 per share at any time prior to July 13, 2020.

On July 1, 2019, Mr. Ek purchased, through D.G.E. Investments, 800,000 non-compensatory warrants in the Company, pursuant to a subscription agreement. Each warrant was purchased for \$20.61, the then current fair market value per share. The terms and conditions for the warrants provide that D.G.E. Investments may purchase the ordinary shares underlying the warrants for \$190.09 per share at any time prior to July 1, 2022.

The warrants are subject to adjustment upon certain corporate events.

Compensation Tables

Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the years ended December 31, 2019, 2018 and 2017.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards (\$) ⁽¹⁾	Stock Awards (\$)	All Other Compensation (\$)	Total (\$)
Daniel Ek (CEO)	2019	— ⁽³⁾	— ⁽³⁾	—	—	336,462 ⁽²⁾	336,462
	2018	— ⁽³⁾	— ⁽³⁾	—	—	2,220	2,220
	2017	440,281 ⁽³⁾⁽⁴⁾	1,000,000 ⁽³⁾	—	—	95,321	1,535,602
Barry McCarthy (CFO)	2019	560,000	—	6,682,200	—	8,400	7,250,600
	2018	560,000	—	5,000,341	—	2,220	5,562,561
	2017	560,000	—	4,272,107	—	88,465	4,920,572
Dawn Ostroff (Chief Content Officer)	2019	1,000,000	1,000,000	1,500,679	3,974,952 ⁽⁵⁾	8,400 ⁽⁶⁾	7,484,031
	2018	420,513 ⁽⁷⁾	1,000,000	6,499,650	—	10,470	7,930,633
Gustav Söderström (Chief Research & Development Officer)	2019	320,514 ⁽⁴⁾	—	6,682,200	—	113,494 ⁽⁸⁾	7,116,208
	2018	332,963 ⁽⁴⁾	—	5,000,341	—	90,949	5,424,253
	2017	390,347 ⁽⁴⁾	—	4,272,107	—	98,007	4,760,461
Alex Norström (Chief Premium Business Officer)	2019	333,335 ⁽⁴⁾	—	6,002,664	—	91,379 ⁽⁹⁾	6,427,378
	2018	346,282 ⁽⁴⁾	—	4,499,406	—	96,889	4,942,577
	2017	389,335 ⁽⁴⁾	—	3,417,692	—	102,457	3,909,484

- (1) Amounts reflect the grant-date Black-Scholes value of the stock options granted to our named executive officers, computed in accordance with IFRS 2, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of all option awards made to executive officers in “Operating and Financial Review and Prospects” and in Note 18 of the consolidated financial statements included elsewhere in this 20-F.
- (2) Amount reflects \$336,462 for home security services.
- (3) As of July 1, 2017, Mr. Ek ceased being entitled to receive a base salary. In 2017, Mr. Ek was eligible to receive a one-time bonus subject to the fulfillment of certain milestones and/or discretionary approval of our board of directors. For further information on such bonus, please see “—Executive Compensation Program Components—Base Salary and Bonus.”
- (4) Messrs. Ek, Söderström, and Norström were each paid in Swedish Krona in 2017, 2018 and 2019. The 2017 dollar amounts are based on a currency translation of SEK 8.20 per dollar as published by Reuters on December 31, 2017, and the 2018 dollar amounts are based on a currency translation of SEK 9.01 per dollar as published by Reuters on December 31, 2018. The 2019 dollar amounts are based on a currency translation of SEK 9.36 per dollar as published by Reuters on December 31, 2019. The amounts include vacation pay received by Messrs. Ek, Söderström, and Norström pursuant to Swedish standards. The amount shown in 2017 for Mr. Ek reflects his salary earned with respect to the first half of 2017, as further explained in footnote (3).
- (5) Amounts reflect the grant-date fair value of the RSUs granted to Ms. Ostroff, computed in accordance with IFRS 2, rather than the amounts paid to or realized by her.
- (6) Amount reflects Company matching contributions to the 401(k) plan.
- (7) Ms. Ostroff’s service as the Company’s Chief Content Officer commenced July 31, 2018. Amount reflects the actual base salary paid to Ms. Ostroff during fiscal year 2018.
- (8) Amount includes \$91,666 in contributions to the Swedish retirement plan and \$21,828 for home security services.
- (9) Amount includes \$91,379 in contributions to the Swedish retirement plan.

Grants of Plan-Based Awards in 2019

The following table sets forth information regarding grants of plan-based awards made to our named executive officers during the year ended December 31, 2019:

Name	Grant Date	All Other Stock Awards: Number of Shares of Stocks or Units (# shares)	All Other Option Awards: Number of Securities Underlying Options (# shares)	Exercise or Base Price of Option Awards Per Ordinary Share (\$)	Grant Date Fair Value of Stock and Option Awards \$(⁽¹⁾)
Barry McCarthy	03/01/2019	—	171,014	138.00	6,682,200 ⁽¹⁾
Dawn Ostroff	03/01/2019	—	38,406	138.00	1,500,679 ⁽¹⁾
	03/01/2019	28,804	—	—	3,974,952 ⁽²⁾
Gustav Söderström	03/01/2019	—	171,014	138.00	6,682,200 ⁽¹⁾
Alex Norström	03/01/2019	—	153,623	138.00	6,002,664 ⁽¹⁾

- (1) Amounts reflect the grant-date Black-Scholes value of the stock options granted during 2019 computed in accordance IFRS 2, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of all option awards made to executive officers in “Operating and Financial Review and Prospects” and in Note 18 of the consolidated financial statements included elsewhere in this 20-F.
- (2) Amounts reflect the grant-date fair value of the RSUs granted to Ms. Ostroff, rather than the amounts paid to or realized by the named individual.

Outstanding Equity Awards at 2019 Fiscal Year-End

The following table summarizes the number of ordinary shares underlying outstanding equity incentive plan awards for each named executive officer as of December 31, 2019:

Name	Grant Date	Option Awards				Ordinary Share Awards	
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Ordinary Shares That Have Not Vested (#)	Market Value of Ordinary Shares That Have Not Vested (\$) ⁽³⁾
Daniel Ek	09/12/2016	—	65,480 ⁽¹⁾	42.18	03/31/2021	—	—
Barry McCarthy	07/06/2015	530,600	—	43.73	03/31/2020	—	—
	03/01/2016	200,960	—	41.20	03/31/2021	—	—
	03/01/2017	17,600	72,480 ⁽¹⁾	50.70	03/31/2022	—	—
	03/01/2018	72,680	72,680 ⁽¹⁾	123.13	03/31/2023	—	—
	03/01/2019	32,065	138,949 ⁽²⁾	138.00	03/01/2024	—	—
Dawn Ostroff	08/01/2018	58,514	75,231 ⁽¹⁾	180.12	03/31/2023	—	—
	03/01/2019	7,201	31,205 ⁽²⁾	138.00	03/01/2024	—	—
	03/01/2019	—	—	—	—	23,403 ⁽⁴⁾	3,499,919
Gustav Söderström	12/01/2015	25,240	—	42.48	03/31/2020	—	—
	10/06/2016	26,680	8,880 ⁽¹⁾	42.18	03/31/2021	—	—
	03/01/2017	122,760	70,520 ⁽¹⁾	50.70	03/31/2022	—	—
	03/01/2018	72,680	72,680 ⁽¹⁾	123.13	03/31/2023	—	—
	03/01/2019	32,065	138,949 ⁽²⁾	138.00	03/01/2024	—	—
Alex Norström	03/01/2017	169,200	56,400 ⁽¹⁾	50.70	03/31/2022	—	—
	03/01/2018	65,400	65,400 ⁽¹⁾	123.13	03/31/2023	—	—
	03/01/2019	28,804	124,819 ⁽²⁾	138.00	03/01/2024	—	—

⁽¹⁾ Of each option grant, 3/16ths of the total number of options granted vested on the first day of any of March 1, June 1, September 1, or December 1 falling more than three months from the grant date and thereafter 1/16th vests on each March 1, June 1, September 1, and December 1 thereafter, subject to continued employment.

⁽²⁾ Of each option grant, 3/48ths of the total number of options granted vested on the third calendar month following the date of grant, and thereafter 1/48th of the total number of options granted vests on the first day of each calendar month thereafter, subject to continued employment.

⁽³⁾ Values were calculated based on a \$149.55 closing price of our ordinary shares, as reported on the NYSE on December 31, 2019.

⁽⁴⁾ 3/48ths of Ms. Ostroff's RSU grant vested on June 1, 2019 and thereafter 1/48th vests on the first day of each calendar month thereafter, subject to continued employment.

2019 Option Exercises and Stock Vested

The following table summarizes stock option exercises by and vesting of stock applicable to our named executive officers during the year ended December 31, 2019:

Name	Option Awards		Stock Awards	
	Number of Ordinary Shares Acquired on Exercise (#)	Value Realized on Exercise (\$) ⁽¹⁾	Number of Ordinary Shares Acquired on Vesting (#)	Value Realized on Vesting (\$) ⁽²⁾
Daniel Ek	352,880	34,793,136	—	—
Barry McCarthy	835,280	79,840,386	—	—
Dawn Ostroff	—	—	5,401 ⁽³⁾	728,874
Gustav Söderström	65,120	6,707,949	5,920 ⁽⁴⁾	798,904
Alex Norström	45,000	4,643,542	1,680 ⁽⁵⁾	226,716

⁽¹⁾ Represents the difference between the market value per share of the shares acquired on exercise, as determined based on the closing price of our ordinary shares as reported on the NYSE on the date of exercise, and the exercise price of the option.

⁽²⁾ Value realized is calculated based on the closing price of our ordinary shares as reported on the NYSE on the date of vesting.

- (3) Includes 2,519 RSUs which the Company retained as part of a net share settlement to satisfy the applicable tax withholding liability of Ms. Ostroff related to the vesting of such shares.
- (4) Includes 2,960 RSUs which the Company retained as part of a net share settlement to satisfy the applicable tax withholding liability of Mr. Söderström related to the vesting of such shares.
- (5) Includes 840 RSUs which the Company retained as part of a net share settlement to satisfy the applicable tax withholding liability of Mr. Norström related to the vesting of such shares.

Non-Employee Director Compensation

Similarly to our executive compensation decisions, the remuneration committee bases its decisions regarding non-employee director compensation, at least in part, by reference to the compensation of the non-employee directors in the Peer Group (as described above in “—Engagement of Compensation Consultant”). Our non-employee directors are also eligible to participate in our new incentive mix program, which provides our non-employee directors with maximum flexibility and individual autonomy, by allowing our non-employee directors to have the ability to choose their own composition of long-term incentive awards each year. For further information on our new incentive mix program, please see “—Long Term Incentives” above. Each such grant generally vests ratably over four years. The non-employee director RSUs will fully vest upon the occurrence of a change in control. Like employee RSUs, the RSUs are settled within 30 days following vesting, subject to payment by the holder of the nominal value per ordinary share, and unvested RSUs are forfeited on termination of service. The plans provide for certain potential adjustments in the event of corporate transactions.

In 2019, each of our non-employee directors participated in the incentive mix program. The following table shows the dollar amount of incentive compensation allocated to each named executive officer, as well as the allocations chosen by each such individual:

Name	Aggregate Long-Term Incentive Award Dollar Value (\$)	2019 At-the-Money Stock Option Allocation (#)	2019 Out-of-the-Money Stock Option Allocation (#)	2019 RSU Allocation (#)	2019 Cash Allocation (\$)
Martin Lorentzon	340,000	—	18,602	—	—
Christopher Marshall	340,000	4,651	9,301	—	—
Shishir Mehrotra	340,000	—	13,952	581	—
Heidi O'Neill	340,000	2,325	—	1,744	—
Ted Sarandos	340,000	4,651	9,301	—	—
Thomas Staggs	360,000	7,386	—	616	—
Cristina Stenbeck	340,000	—	4,651	1,744	—
Padmasree Warrior	340,000	—	4,651	—	229,500

On October 17, 2019, the Company issued 1,086,342 ordinary shares and 10,863,420 beneficiary certificates to Martin Lorentzon, a member of the board of directors of the Company, through Rosello, an entity indirectly wholly owned by him, upon the effective net settlement of 1,920,000 non-compensatory warrants that were granted on October 17, 2016.

2019 Director Compensation

The following table sets forth information concerning the compensation of our non-employee directors during the year ended December 31, 2019:

Name ⁽¹⁾	Fees Earned or Paid in Cash (\$)	Stock Awards (\$) ⁽²⁾	Stock Options (\$) ⁽³⁾	Total (\$) ⁽⁴⁾
Martin Lorentzon	—	—	390,176	390,176
Christopher Marshall	—	—	367,762	367,762
Shishir Mehrotra	—	84,954	292,643	377,597
Heidi O'Neill	—	255,008	86,318	341,326
Ted Sarandos	—	—	367,762	367,762
Thomas Staggs	—	90,072	274,221	364,293
Cristina Stenbeck	—	255,008	97,553	352,561
Padmasree Warrior	229,500	—	97,553	327,053

- (1) Mr. Ek serves on our board of directors. His compensation is fully reflected in the Summary Compensation Table.
- (2) Amounts reflect the aggregate grant-date fair value of the RSUs computed in accordance with IFRS 2, rather than the amounts paid to or realized by the named individual.
- (3) Amounts reflect the aggregate grant-date Black-Scholes value of the stock options granted during 2019 computed in accordance IFRS 2, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of all option awards made to executive officers in "Operating and Financial Review and Prospects" and in Note 18 of the consolidated financial statements included elsewhere in this 20-F.
- (4) The table below shows the aggregate numbers of stock awards and stock options held as of December 31, 2019 by each non-employee director who was serving as of December 31, 2019.

Name	Restricted Stock Units Outstanding at Fiscal Year End	Stock Options Outstanding at Fiscal Year End
Martin Lorentzon	3,617	18,602
Christopher Marshall	5,377	13,952
Shishir Mehrotra	4,198	13,952
Heidi O'Neill	4,721	2,325
Ted Sarandos	5,417	13,952
Thomas Staggs	4,322	7,386
Cristina Stenbeck	5,361	4,651
Padmasree Warrior	3,617	4,651

Item 7. Major Shareholders and Related Party Transactions.

A. Major Shareholders

The following table sets forth, as of December 31, 2019 (except where noted), the number of our ordinary shares and beneficiary certificates held by each person we know to be the beneficial owner of more than 5% of our ordinary shares and beneficiary certificates, respectively, and the percentage of total votes held by each such person. The voting rights of our major shareholders are the same as the voting rights of holders of our ordinary shares and beneficiary certificates who are not our major shareholders. As of December 31, 2019, the registrar and transfer agent for our Company reported that 124,577,402 of our ordinary shares were held by 142 record holders in the United States and none of our beneficiary certificates were held by record holders in the United States.

In accordance with the rules of the SEC, beneficial ownership includes voting or investment power with respect to securities and includes the ordinary shares issuable pursuant to options, warrants, and RSUs that are exercisable or settled within 60 days of December 31, 2019. Ordinary shares issuable pursuant to options, warrants, and RSUs are deemed outstanding for computing the percentage of the class beneficially owned by the person holding such options, warrants, and RSUs but are not deemed outstanding for computing the percentage of the class beneficially owned by any other person. The percentage of beneficial ownership for the following table is based on 184,325,957 total ordinary shares and 378,201,910 total beneficiary certificates outstanding as of December 31, 2019.

Name	Ordinary Shares		Beneficiary Certificates ⁽⁵⁾		Percent of Total Voting Power
	Number	Percent	Number	Percent	
Daniel Ek ⁽¹⁾⁽⁵⁾	34,512,368	18.5%	154,476,790	40.8%	33.6%
Martin Lorentzon ⁽²⁾	22,380,375	12.1%	223,725,120	59.2%	43.8%
Baillie Gifford & Co ⁽³⁾	21,720,001	11.8%	—	—	3.9%
Tencent ⁽⁴⁾	16,631,969	9.0%	—	—	* (6)

- (1) Includes 15,447,679 ordinary shares that are held by D.G.E. Investments. Also includes 2,400,000 ordinary shares issuable pursuant to warrants that are held of record by D.G.E. Investments and 32,720 ordinary shares issuable pursuant to options that are held of record by Daniel Ek that, in each case, are exercisable or settled within 60 days of December 31, 2019. Mr. Ek is the sole shareholder of D.G.E. Holding, which is the sole shareholder of D.G.E. Investments. Mr. Ek exercises voting power over the ordinary shares held of record by TME Hong Kong, Image Frame, Tencent Mobility Limited, and Distribution Pool Limited through his indirect ownership of D.G.E. Investments, which holds an irrevocable proxy with regard to these ordinary shares. As such, Mr. Ek may be deemed to share beneficial ownership of the ordinary shares held of record by TME Hong Kong, Image Frame, Tencent Mobility Limited, and Distribution Pool Limited. Additionally, each of D.G.E. Holding and Mr. Ek may be deemed to share beneficial ownership of the ordinary shares held of record by D.G.E. Investments. The business address of D.G.E. Holding and D.G.E. Investments is Office 101, Omega Business Center, 18 Stratigou Temagia Avenue, 6047 Larnaca, Cyprus. The business address of Mr. Ek is c/o Spotify AB Regeringsgatan 19, 111 53 Stockholm, Sweden.
- (2) Includes 22,372,512 ordinary shares held by Rosello. Also includes 4,651 ordinary shares issuable pursuant to options and 446 ordinary shares issuable pursuant to RSUs that are held of record by Mr. Lorentzon that, in each case, are exercisable or settled within 60 days of December 31, 2019. Mr. Lorentzon is the sole shareholder of Amaltea, which is the sole shareholder of Rosello. As such, each of Amaltea and Mr. Lorentzon may be deemed to share beneficial ownership of the shares held of record by Rosello. The business address of Rosello is 22 Stasikratous Street, Office 001, 1065 Nicosia, Cyprus.
- (3) Based on information reported on Schedule 13G, as filed by Baillie Gifford & Co (Scottish partnership) (“Baillie Gifford”) with the SEC on January 22, 2020, Baillie Gifford has the following powers with respect to our ordinary shares: (i) sole voting power: 15,815,869; (ii) shared voting power: 0; (c) sole dispositive power: 21,720,001; and (iv) shared dispositive power: 0. The business address for Baillie Gifford is Carlton Square, 1 Greenside Row, Edinburgh EH1 3AN, Scotland, UK.
- (4) Includes 4,276,200 ordinary shares held of record by TME Hong Kong, 9,076,240 ordinary shares held of record by Image Frame, 3,227,920 ordinary shares held of record by Tencent Mobility Limited, and 51,609 ordinary shares held by Distribution Pool Limited received in connection with a distribution in kind of the Company’s ordinary shares by a fund in which Distribution Pool Limited is a limited partner. Tencent is also the majority equity holder of TME, which is the sole shareholder of TME Hong Kong. Each of Image Frame, Tencent Mobility Limited, and Distribution Pool Limited is wholly owned by Tencent. As such, Tencent may be deemed to share beneficial ownership of the ordinary shares held of record by each of TME Hong Kong, Image Frame, Tencent Mobility Limited, and Distribution Pool Limited. The address for Tencent is Level 29, Three Pacific Place, 1 Queen’s Road East, Wanchai, Hong Kong.
- (5) Our shareholders have authorized the issuance of up to 1,400,000,000 beneficiary certificates to shareholders of the Company without reserving to our existing shareholders a preemptive right to subscribe for the beneficiary certificates issued in the future. Pursuant to our articles of association, our beneficiary certificates may be issued at a ratio of between one and 20 beneficiary certificates per ordinary share as determined by our board of directors or its delegate at the time of issuance. We have issued ten beneficiary certificates per ordinary share held of record to entities beneficially owned by our founders, Daniel Ek and Martin Lorentzon, for a total of 378,201,910 beneficiary certificates outstanding as of December 31, 2019. The beneficiary certificates carry no economic rights and are issued to provide the holders of such certificates additional voting rights. Each beneficiary certificate entitles its holder to one vote. The beneficiary certificates, subject to certain exceptions, are non-transferable and shall be automatically canceled for no consideration in the case of sale or transfer of the ordinary share to which they are linked. See “Item 10.B. Memorandum and Articles of Association.”
- (6) Mr. Ek exercises voting power over the ordinary shares held of record by TME Hong Kong, Image Frame, Tencent Mobility Limited, and Distribution Pool Limited through his indirect ownership of D.G.E. Investments, which holds an irrevocable proxy with regard to these ordinary shares.

Change in Control Arrangements

None applicable.

B. Related Party Transactions

Luxembourg law prescribes certain procedures for related party transactions with directors, and our articles of association mandate that directors with a direct or indirect personal interest in any transaction that conflicts with the Company’s interest shall make that interest known and recorded in the board minutes and shall not participate in discussing or voting on such transaction. In addition, our articles of association provide that any such conflict of interest must be reported to the next general meeting of shareholders of the Company prior to any resolution taking place at such meeting. Below is a summary of our related-party transactions since the beginning of our last full fiscal year on January 1, 2019.

Please see “Item 6. Directors, Senior Management and Employees—E. Share Ownership—Warrants” and Note 25 to the consolidated financial statements for a description of the transactions relating to the warrants purchased by Messrs. Ek and Lorentzon.

We have entered into an indemnification agreement with each of our directors, senior management, and certain other employees. The indemnification agreements and our articles of association require us to indemnify our directors and officers to the fullest extent permitted by Luxembourg law.

Related Party Transaction Policy

Our board of directors has adopted the Related Party Transaction Policy, which requires that any material transaction between us and any related party, including our directors and senior management as well as their family members, be reviewed and approved by the audit committee to ensure that the transaction is on terms comparable to those that could be obtained in arm’s length dealings with an unrelated third party.

C. Interests of Experts and Counsel

Not applicable

Item 8. Financial Information

A. Consolidated Statements and Other Financial Information

Refer to “Item 18. Financial Statements” for our consolidated financial statements and report of our independent registered public accounting firm included elsewhere in this document.

Export Sales

Refer to “Item 4.B. Business Overview” for a discussion of our sales and distribution channels.

Legal or arbitration proceedings

Refer to Notes 22 and 24 of the consolidated financial statements included elsewhere in this report for information regarding provisions made for legal proceedings.

Dividend Policy

We have never declared or paid any cash dividends on our share capital, and we do not expect to pay dividends or other distributions on our ordinary shares in the foreseeable future. There are no legislative or other legal provisions currently in force in Luxembourg or arising under our articles of association that restrict the payment of dividends or distributions to holders of our ordinary shares not resident in Luxembourg, except for regulations restricting the remittance of dividends, distributions, and other payments in compliance with United Nations and EU sanctions. We currently intend to retain any future earnings for working capital and general corporate purposes. Under Luxembourg law, the amount and payment of dividends or other distributions is determined by a simple majority vote at a general shareholders’ meeting based on the recommendation of our board of directors, except in certain limited circumstances. Pursuant to our articles of association, the board of directors has the power to pay interim dividends or make other distributions in accordance with applicable Luxembourg law. Distributions may be lawfully declared and paid if our net profits and/or distributable reserves are sufficient under Luxembourg law. All of our ordinary shares rank *pari passu* with respect to the payment of dividends or other distributions unless the right to dividends or other distributions has been suspended in accordance with our articles of association or applicable law. Holders of beneficiary certificates are not entitled to receive any dividend payments with respect to such beneficiary certificates.

Under Luxembourg law, at least 5% of our net profits per year must be allocated to the creation of a legal reserve until such reserve has reached an amount equal to 10% of our issued share capital. The allocation to the legal reserve becomes compulsory again when the legal reserve no longer represents 10% of our issued share capital. The legal reserve is not available for distribution.

We are a holding company and have no material assets other than our indirect ownership of ordinary shares in our operating subsidiaries. Our ability to generate income and pay dividends is dependent on the ability of our subsidiaries to declare and pay dividends or lend funds to us.

The registrar and transfer agent for Spotify’s ordinary shares is Computershare Trust Company, N.A.

B. Significant Changes

There have been no significant changes since the approval date of the financial statements included elsewhere in this annual report. Please see Note 27 of the consolidated financial statements elsewhere in this annual report for details of events after the reporting period.

Item 9. The Offer and Listing

A. Offer and Listing Details

Our ordinary shares are listed on the NYSE under the symbol “SPOT”.

B. Plan of Distribution

Not applicable

C. Markets

Our ordinary shares are listed and traded on the NYSE.

D. Selling Shareholders

Not applicable

E. Dilution

Not applicable

F. Expenses of the Issue

Not applicable

Item 10. Additional Information

A. Share Capital

Not applicable

B. Memorandum and Articles of Association

We are registered with the Luxembourg Trade and Companies' Register under number B.123.052. Our corporate purpose, as stated in Article 3 of our articles of association, is the acquisition and holding of direct or indirect interests in Luxembourg and/or in foreign undertakings, as well as the administration, development, and management of our holdings. We may provide any financial assistance to subsidiaries, affiliated companies, or other companies forming part of the group of which we belong, including, but not limited to, the providing of loans and the granting of guarantees or securities in any kind or form. We also may use our funds to invest in real estate, intellectual property rights, or any other movable or immovable assets in any kind or form. We may borrow in any kind or form and privately issue bonds or notes. In general, we may carry out any commercial, industrial, or financial operation that we may deem useful in the accomplishment and development of our purposes.

Issuance of Ordinary Shares and Preemptive Rights

Pursuant to Luxembourg law, the issuance of our ordinary shares requires approval by a quorum of the general meeting of shareholders, and a majority is required for the amendment of articles of association. The general meeting of shareholders may approve an authorized share capital and authorize the board of directors to issue ordinary shares up to the maximum amount of such authorized share capital for a maximum period of five years after the date that the minutes of the relevant general meeting approving such authorization are published in the Luxembourg official gazette (*Recueil électronique des Sociétés et Associations*, as applicable). The general meeting may amend, renew, or extend such authorized share capital and such authorization to the board of directors to issue ordinary shares. Our articles of association provide that no fractional ordinary shares shall be issued.

The board of directors resolves on the issuance of ordinary shares out of the authorized share capital (*capital autorisé*) in accordance with the quorum and voting thresholds set forth in the articles of association. The board of directors also resolves on the applicable procedures and timelines to which such issuance will be subjected. If the proposal of the board of directors to issue new ordinary shares exceeds the limits of our authorized share capital, the board of directors must then convene the shareholders to an extraordinary general meeting to be held in the presence of a Luxembourg notary for the purpose of increasing the issued share capital. Such meeting will be subject to the quorum and majority requirements required for amending the articles of association. If the capital call proposed by the board of directors consists of an increase in the shareholders' commitments, the board of directors must convene the shareholders to an extraordinary general meeting to be held in the presence of a Luxembourg notary for such purpose. Such meeting will be subject to the unanimous consent of the shareholders.

Under Luxembourg law, existing shareholders benefit from a preemptive subscription right on the issuance of ordinary shares for cash consideration. However, our shareholders have, in accordance with Luxembourg law, authorized the board of directors to suppress, waive, or limit any preemptive subscription rights of shareholders provided by law to the extent that the board of directors deems such suppression, waiver, or limitation advisable for any issuance or issuances of ordinary shares within the scope of our authorized share capital. The general meeting of shareholders duly convened to consider an amendment to the articles of association also may, by two-thirds majority vote, limit, waive, or cancel such preemptive rights or renew, amend, or extend them, in each case for a period not to exceed five years. Such ordinary shares may be issued above, at, or below market value, but in any event not below the nominal value or below the accounting par value per ordinary share. The ordinary shares also may be issued by way of incorporation of available reserves, including share premium.

Repurchase of Ordinary Shares

Spotify Technology S.A. cannot subscribe for its own ordinary shares. Spotify Technology S.A. may, however, repurchase issued ordinary shares or have another person repurchase issued ordinary shares for its account, subject to the following conditions:

- prior authorization by a simple majority vote at an ordinary general meeting of shareholders, which authorization sets forth:
 - the terms and conditions of the proposed repurchase and in particular the maximum number of ordinary shares to be repurchased;
 - the duration of the period for which the authorization is given, which may not exceed five years; and
 - in the case of repurchase for consideration, the minimum and maximum consideration per share, provided that the prior authorization shall not apply in the case of ordinary shares acquired by either Spotify Technology S.A., or by a person acting in his or her own name on its behalf, for the distribution thereof to its staff or to the staff of a company with which it is in a control relationship;
- only fully paid-up ordinary shares may be repurchased;
- the voting and dividend rights attached to the repurchased shares will be suspended as long as the repurchased ordinary shares are held by Spotify Technology S.A.; and
- the acquisition offer must be made on the same terms and conditions to all the shareholders who are in the same position, except for acquisitions which were unanimously decided by a general meeting at which all the shareholders were present or represented. In addition, listed companies may repurchase their own shares on the stock exchange without an acquisition offer having to be made to our shareholders.

The authorization will be valid for a period ending on the earlier of five years from the date of such shareholder authorization and the date of its renewal by a subsequent general meeting of shareholders. Pursuant to such authorization, the board of directors is authorized to acquire and sell Spotify Technology S.A.'s ordinary shares under the conditions set forth in Article 430-15 of the Luxembourg Company Law. Such purchases and sales may be carried out for any authorized purpose or any purpose that is authorized by the laws and regulations in force. The purchase price per ordinary share to be determined by the board of directors or its delegate shall represent (i) not less than the par value, and (ii) not more than the fair market value of such ordinary share.

The general meeting of shareholders of the Company held on April 21, 2016 authorized the board of directors of the Company to repurchase up to 10 million ordinary shares during a period of five years, for a redemption price to be determined by the board of directors within the following limits: at least the par value and at the most recent fair market value. That authorization to repurchase will expire on April 21, 2021 unless renewed by decision of a general meeting of shareholders of the Company. Pursuant to that authorization, in November 2018, the board of directors approved a share repurchase program up to the amount of \$1 billion. See "Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers" for more information.

In addition, pursuant to Luxembourg law, Spotify Technology S.A. may directly or indirectly repurchase ordinary shares by resolution of its board of directors without the prior approval of the general meeting of shareholders if such repurchase is deemed by the board of directors to be necessary to prevent serious and imminent harm to Spotify Technology S.A., or if the acquisition of ordinary shares has been made with the intent of distribution to its employees and/or the employees of any entity having a controlling relationship with it (i.e., its subsidiaries or controlling shareholder).

Form and Transfer of Ordinary Shares

Our ordinary shares are issued in registered form only and are freely transferable under Luxembourg law and our articles of association. Our board of directors may, however, impose transfer restrictions for ordinary shares that are registered, listed, quoted, dealt in, or that have been placed in certain jurisdictions in compliance with the requirements applicable therein. Luxembourg law does not impose any limitations on the rights of Luxembourg or non-Luxembourg residents to hold or vote our ordinary shares.

Under Luxembourg law, the ownership of registered ordinary shares is *prima facie* established by the inscription of the name of the shareholder and the number of ordinary shares held by him or her in the shareholders' register.

Without prejudice to the conditions for transfer by book entry where ordinary shares are recorded in the shareholders' register on behalf of one or more persons in the name of a depository, each transfer of ordinary shares shall be effected by written declaration of transfer to be recorded in the shareholders' register, with such declaration to be dated and signed by the transferor and the transferee or by their duly appointed agents. We may accept and enter into the shareholders' register any transfer effected pursuant to an agreement or agreements between the transferor and the transferee, true and complete copies of which have been delivered to us.

Our articles of association provide that we may appoint registrars in different jurisdictions, each of whom may maintain a separate register for the ordinary shares entered in such register, and that the holders of ordinary shares shall be entered into one of the registers. Shareholders may elect to be entered into one of these registers and to transfer their ordinary shares to another register so maintained. Entries in these registers will be reflected in the shareholders' register maintained at our registered office.

Our ordinary shares are listed on the NYSE and the laws of the State of New York apply to the property law aspects of the ordinary shares reflected in the register administered by our transfer agent.

In addition, a shareholders' register will be maintained by us at our registered office in Luxembourg. Transfer of record ownership of ordinary shares is effected by a written deed of transfer acknowledged by us or by our transfer agent and registrar acting as our agent on our behalf.

Liquidation Rights and Dissolution

In the event of our dissolution, liquidation, or winding-up, any surplus of the assets remaining after allowing for the payment of all of our liabilities will be paid out to the shareholders pro rata according to their respective shareholdings. The decisions to dissolve, liquidate, or wind-up require approval by an extraordinary general meeting of our shareholders.

Merger and De-Merger

A merger by absorption whereby one Luxembourg company, after its dissolution without liquidation, transfers all of its assets and liabilities to another company in exchange for the issuance of ordinary shares in the acquiring company to the shareholders of the company being acquired, or a merger effected by transfer of assets to a newly incorporated company, must, in principle, be approved at an extraordinary general meeting of shareholders of the Luxembourg company, enacted in front of a Luxembourg notary. Similarly, a de-merger of a subsidiary of a Luxembourg company is generally subject to the approval by an extraordinary general meeting of shareholders, enacted in front of a Luxembourg notary.

No Appraisal Rights

Neither Luxembourg law nor our articles of association provide for appraisal rights of dissenting shareholders.

General Meeting of Shareholders

Any regularly constituted general meeting of shareholders represents the entire body of our shareholders.

Any holder of our share capital is entitled to attend our general meeting of shareholders, either in person or by proxy, to address the general meeting of shareholders and to exercise voting rights, subject to the provisions of our articles of association. Each ordinary share entitles the holder to one vote at a general meeting of shareholders, unless such holder has a beneficiary certificate. Our articles of association provide that our board of directors may determine all other conditions that must be fulfilled in order to take part in the general meeting of shareholders.

When convening a general meeting of shareholders, we will send a convening notice by registered mail to the registered address of each shareholder at least eight days before the meeting. The convening notices for every general meeting shall contain the agenda and shall take the form of announcements filed with the register of commerce and companies, published on the Luxembourg official gazette (*Recueil Electronique des Sociétés et Associations*), and published in a Luxembourg newspaper at least 15 days before the meeting. No proof is required that this formality has been complied with. As all our Ordinary Shares are in registered form we may decide to send the convening notice only by registered mail to the registered address of each shareholder at least eight days before the meeting. In that case, the legal requirements regarding the publication of the convening notice in the Luxembourg official gazette (*Recueil Electronique des Sociétés et Associations*) and in a Luxembourg newspaper do not apply.

Our articles of association provide that the general meeting also will be convened in accordance with the publicity requirements of any regulated market on which our ordinary shares are listed.

A shareholder may participate in general meetings of shareholders by appointing another person as his or her proxy, the appointment of which shall be in writing. Our articles of association also provide that, in the case of ordinary shares held through the operator of a securities settlement system or depository, a holder of such ordinary shares wishing to attend a general meeting of shareholders should receive from such operator or depository a certificate certifying the number of ordinary shares recorded in the relevant account on the record date. Such certificates, as well as any proxy forms, should be submitted to us no later than three business days before the date of the general meeting unless our board of directors provides for a different period.

The annual general shareholder meeting must be held within six months from the end of the respective financial year at our registered office or in any other place in Luxembourg as notified to the shareholders.

Luxembourg law provides that the board of directors is obliged to convene a general meeting of shareholders if shareholders representing, in the aggregate, 10% of the issued share capital so request in writing with an indication of the meeting agenda. In such case, the general meeting of shareholders must be held within one month of the request. If the requested general meeting of shareholders is not held within one month, shareholders representing, in the aggregate, 10% of the issued share capital may petition the competent president of the district court in Luxembourg to have a court appointee convene the meeting. Luxembourg law provides that shareholders representing, in the aggregate, 10% of the issued share capital may request that additional items be added to the agenda of a general meeting of shareholders. That request must be made by registered mail sent to our registered office at least five days before the general meeting of shareholders.

Voting Rights

Each ordinary share entitles the holder thereof to one vote. Additionally, each beneficiary certificate entitles its holder to one vote. Pursuant to our articles of association, our beneficiary certificates may be issued at a ratio of between one and 20 beneficiary certificates per ordinary share as determined by our board of directors or its delegate at the time of issuance. The beneficiary certificates carry no economic rights and are issued to provide the holders of such beneficiary certificates additional voting rights. The beneficiary certificates, subject to certain exceptions, are non-transferable and shall automatically be canceled for no consideration in case of sale or transfer of the ordinary share to which they are linked. However, exceptions to transfers of beneficiary certificates or to their cancellation upon sale or transfer of the respective underlying ordinary shares to which they are linked may be made by the board of directors on a case-by-case basis and in its absolute discretion, at which time the board of directors may also recalculate the ratio described above and, if applicable, re-allocate any such non-cancelled beneficiary certificates to the remaining applicable ordinary shares (which are already linked to other beneficiary certificates) on a pro rata basis. Additionally, our articles of association state that all the beneficiary certificates shall be automatically canceled if the number of ordinary shares held by entities wholly owned by our founders, in the aggregate, falls under 7,564,400 ordinary shares. Our founders, who exercise substantial control over the Company and are members of the board of directors, are currently the sole recipients of beneficiary certificates.

Neither Luxembourg law nor our articles of association contain any restrictions as to the voting of our ordinary shares by non-Luxembourg residents.

As described further below, Luxembourg law distinguishes general meetings of shareholders and extraordinary general meetings of shareholders with respect to voting rights.

Ordinary General Meeting. At an ordinary general meeting, there is no quorum requirement and resolutions are adopted by a simple majority of validly cast votes. Abstentions are not considered “votes.”

Extraordinary General Meeting. Extraordinary resolutions are required for any of the following matters, among others: (i) an increase or decrease of the authorized or issued capital, (ii) a limitation or exclusion of preemptive rights, (iii) approval of a statutory merger or de-merger (*scission*), (iv) our dissolution and liquidation, and (v) any and all amendments to our articles of association. Pursuant to our articles of association, for any resolutions to be considered at an extraordinary general meeting of shareholders, the quorum shall be at least one half (50%) of our issued share capital unless otherwise mandatorily required by law. If the said quorum is not present, a second meeting may be convened, for which Luxembourg law does not prescribe a quorum. Any extraordinary resolution shall be adopted at a quorate general meeting, except otherwise provided by law, by at least a two-thirds majority of the votes validly cast on such resolution by shareholders and holders of beneficiary certificates. When the resolution of the general meeting of shareholders changes the respective rights attached to the beneficiary certificates, the resolution must, in order to be valid, fulfill the above-mentioned conditions as to attendance and majority with respect to the holders of beneficiary certificates. Abstentions are not considered “votes.”

Minority Action Right. Luxembourg law provides for a provision whereby the shareholders and/or holders of the beneficiary certificates holding, in the aggregate, 10% of the securities who have a right to vote at the general meeting may act on our behalf to discharge the members of the board of directors for misconduct against our interests, a violation of the law, or a violation of the articles of association.

Dividend Rights

In case of a dividend payment, each shareholder is entitled to receive a dividend right pro rata according to his or her respective shareholding. The dividend entitlement lapses upon the expiration of a five-year prescription period from the date of the dividend distribution. The unclaimed dividends return to our accounts. Holders of beneficiary certificates shall not be entitled to receive any dividend payments with respect to such beneficiary certificate.

Board of Directors

The board of directors will be composed of Class A directors and Class B directors who need not be shareholders. Our Class A directors are Daniel Ek, Martin Lorentzon, and Shishir Mehrotra. Our Class B directors are Christopher Marshall, Barry McCarthy, Ted Sarandos, Thomas Staggs, Padmasree Warrior, Cristina Stenbeck, and Heidi O'Neill. The board of directors may appoint a chairman from among its members. It also may appoint a secretary, who need not be a director and who will be responsible for keeping the minutes of the meetings of the board of directors and of the shareholders. The board of directors will meet upon call by the chairman. A meeting must be convened if any of two directors so require. The chairman will preside at all meetings of the board of directors and, if required, of the shareholders, except that in his or her absence the board of directors may appoint another director as chairman and the general meeting of shareholders may appoint another person as chairman, in each case pro tempore by vote of the majority present or represented at such meeting.

A quorum of the board of directors shall be either one Class A director and one Class B director present at the meeting or, in the event that no Class A or Class B directors have been appointed, three directors holding office, and resolutions are adopted by the simple majority vote of members of the board of directors present or represented. No valid decision of the board of directors may be taken if the necessary quorum has not been reached. In case of an equality of votes, the chairman shall have the right to cast the deciding vote. Such casting vote shall be personal to the appointed chairman and will not transfer to any other director acting as chairman of a meeting of the board of directors in the absence of the appointed chairman. The board of directors also may take decisions by means of resolutions in writing signed by all directors. Each director has one vote.

The general shareholders' meeting elects directors and decides their respective terms. Under Luxembourg law, directors may be reelected, but the term of their office may not exceed six years. The general shareholders' meeting may dismiss one or more directors at any time, with or without cause, by a simple majority of votes cast at a general meeting of shareholders. If the board of directors has a vacancy, the remaining directors have the right to fill such vacancy on a temporary basis pursuant to the affirmative vote of a majority of the remaining directors. The term of a temporary director elected to fill a vacancy expires at the end of the term of office of the replaced director, provided, however, that the next general shareholders' meeting shall be requested definitively to elect any temporary director. For a discussion of the differences in shareholders' rights under Luxembourg law and Delaware law, see "—Differences in Corporate Law."

Within the limits provided for by Luxembourg law, our board of directors may delegate our daily management and the authority to represent us to one or more persons. The delegation to a member of the board of directors shall entail the obligation for the board of directors to report each year to the ordinary general meeting on the salary, fees, and any advantages granted to the delegate. In addition, once granted an authorization from the general meeting of shareholders, our board of directors may set up an executive committee and entrust the latter with any powers of the board of directors, with the exception of (i) our general strategic direction, and (ii) those acts reserved to the board of directors by Luxembourg law. For a discussion of the differences in directors' fiduciary duties under Luxembourg law and Delaware law, see "—Differences in Corporate Law."

No director, solely as a result of being a director, shall be prevented from contracting with us with regard to his tenure in any office or place of profit, or as vendor, purchaser, or in any other manner whatsoever. No contract in which any director is in any way interested shall be voided solely on account of his position as director and no director who is so interested shall account to us or the shareholders for any remuneration, profit, or other benefit realized by the contract solely by reason of the director holding that office or of the fiduciary relationship thereby established.

Any director having a direct or indirect personal and financial interest in a transaction submitted for approval to the board of directors may not participate in the deliberations and vote thereon, if the transaction is not in the ordinary course of our business and conflicts with our interest, in which case the director shall be obliged to advise the board of directors thereof and to cause a record of his statement to be included in the minutes of the meeting. He or she may not take part in these deliberations or vote on such a transaction. At the next general meeting, before any other resolution is put to a vote, a special report shall be made on any transactions in which any of the directors may have had an interest that conflicts with our interest.

Our articles of association provide that directors and officers, past and present, will be entitled to indemnification from us to the fullest extent permitted by Luxembourg law against liability and all expenses reasonably incurred or paid by him or her in connection with any claim, action, suit, or proceeding in which he or she would be involved by virtue of his or her being or having been a director or officer and against amounts paid or incurred by him or her in the settlement thereof. However, no indemnification will be provided against any liability to our directors or officers (i) by reason of willful misfeasance, bad faith, gross negligence, or reckless disregard of the duties of a director or officer, (ii) with respect to any matter as to which any director or officer shall have been finally adjudicated to have acted in bad faith and not in our interest, or (iii) in the event of a settlement, unless approved by a court of competent jurisdiction or the board of directors.

There is no mandatory retirement age for directors under Luxembourg law and no minimum shareholding requirement for directors.

Amendment of Articles of Association

Shareholder Approval Requirements. Luxembourg law requires an extraordinary general meeting of shareholders to resolve upon an amendment of the articles of association to be made by extraordinary resolution. The agenda of the extraordinary general meeting of shareholders must indicate the proposed amendments to the articles of association. An extraordinary general meeting of shareholders convened for the purposes of amending the articles of association must have a quorum of at least 50% of our issued share capital. If the said quorum is not present, a second meeting may be convened at which Luxembourg law does not prescribe a quorum. Irrespective of whether the proposed amendments will be subject to a vote at any duly convened extraordinary general shareholders' meeting, the amendment is subject to the approval of at least two-thirds of the votes cast at such extraordinary general meeting of shareholders by shareholders and holders of beneficiary certificates. When the resolution of the general meeting of shareholders is to change the respective rights attached to the beneficiary certificates, the resolution must, in order to be valid, fulfill the above-mentioned conditions as to attendance and majority with respect to the holders of beneficiary certificates.

Formalities. Any resolutions to amend our articles of association must be taken before a Luxembourg notary, and such amendments must be published in accordance with Luxembourg law.

Differences in Corporate Law

We are incorporated under the laws of Luxembourg. Please see “Description of Share Capital and Articles of Association—Differences in Corporate Law” in the registration statement on Form F-1 originally filed with the SEC on February 28, 2018 and that became effective on March 23, 2018 for a discussion summarizing certain material differences between the rights of holders of our ordinary shares and the rights of holders of the ordinary shares of a typical corporation incorporated under the laws of the state of Delaware, which result from differences in governing documents and the laws of Luxembourg and Delaware.

C. Material Contracts

The following is a summary of each material agreement, other than material agreements entered into in the ordinary course of business, to which we are or have been a party for the two years immediately preceding the date of this report:

- *Subscription Agreement* by and among TME, TME Hong Kong, Spotify Technology S.A., and Spotify AB, dated as of December 8, 2017.
- *Investor Agreement* by and among Spotify Technology S.A., TME, TME Hong Kong, Tencent, Image Frame, and with respect to certain sections only, D.G.E. Investments and Rosello, dated as of December 15, 2017.

D. Exchange Controls

We are not aware of any governmental laws, decrees, regulations or other legislation in Luxembourg that restrict the export or import of capital, including the availability of cash and cash equivalents for use by our affiliated companies, or that affect the remittance of dividends, interest or other payments to non-resident holders of our securities, except for regulations restricting the remittance of dividends, distributions, and other payments in compliance with United Nations and EU sanctions.

E. Taxation

Luxembourg Tax Considerations

The following is an overview of certain material Luxembourg tax consequences of purchasing, owning, and disposing of the ordinary shares issued by us. It does not purport to be a complete analysis of all possible tax situations that may be relevant to a decision to purchase, own, or deposit our ordinary shares. It is included herein solely for preliminary information purposes and is not intended to be, nor should it construed to be, legal or tax advice. Prospective purchasers of our ordinary shares should consult their own tax advisers as to the applicable tax consequences of the ownership of our ordinary shares, based on their particular circumstances. The following description of Luxembourg tax law is based upon Luxembourg law and regulations as in effect and as interpreted by the Luxembourg tax authorities as of the date of this annual report and is subject to any amendments in law (or in interpretation) later introduced, whether or not on a retroactive basis. Please be aware that the residence concept used under the respective headings below applies for Luxembourg tax assessment purposes only. Any reference in this section to a tax, duty, levy, impost or other charge or withholding of a similar nature refers to Luxembourg tax laws and/or concepts only. Also, please note that a reference to Luxembourg income tax encompasses corporate income tax (*impôt sur le revenu des collectivités*), municipal business tax (*impôt commercial communal*), a solidarity surcharge (*contribution au fonds pour l'emploi*), and personal income tax (*impôt sur le revenu*) generally. Corporate taxpayers may further be subject to net worth tax (*impôt sur la fortune*), as well as other duties, levies or taxes. Corporate income tax, municipal business tax, as well as the solidarity surcharge invariably applies to most corporate taxpayers

resident of Luxembourg for tax purposes. Individual taxpayers are generally subject to personal income tax and to the solidarity surcharge. Under certain circumstances, where an individual taxpayer acts in the course of the management of a professional or business undertaking, municipal business tax may apply as well.

Taxation of the Company

Income Tax

As the Company is a fully-taxable Luxembourg company, its net taxable profit is as a rule subject to corporate income tax (“CIT”) and municipal business tax (“MBT”) at ordinary rates in Luxembourg.

The taxable profit as determined for CIT purposes is applicable, with minor adjustments, for MBT purposes. CIT is levied at an effective maximum rate of 18.19% as from 2019 (inclusive of the 7% surcharge for the employment fund). MBT is levied at a variable rate according to the municipality in which the Company is located (6.75% in the City of Luxembourg in 2019). The maximum aggregate CIT and MBT rate consequently amounts to 24.94% as from 2019 for companies located in the City of Luxembourg.

Dividends and other payments derived from ordinary shares by the Company are subject to income taxes, unless the conditions of the participation exemption regime, as described below, are satisfied. A tax credit is generally granted for withholding taxes levied at source within the limit of the tax payable in Luxembourg on such income, whereby any excess withholding tax is not refundable.

Under the participation exemption regime (subject to the relevant anti-abuse rules), dividends derived from ordinary shares may be exempt from income tax if (i) the distributing company is a qualified subsidiary (“Qualified Subsidiary”), and (ii) at the time the dividend is put at the company’s disposal, the company has held or commits itself to hold for an uninterrupted period of at least 12 months’ shares representing a direct participation in the share capital of the Qualified Subsidiary (a) of at least 10%, or (b) of an acquisition price of at least €1.2 million (or an equivalent amount in another currency). A Qualified Subsidiary means (i) a Luxembourg resident fully-taxable company limited by share capital (*société de capitaux*), (ii) a company covered by Article 2 of the Council Directive 2011/96/EU of November 30, 2011 (the “EU Parent-Subsidiary Directive”), or (iii) a non-resident company limited by share capital (*société de capitaux*) liable to a tax corresponding to Luxembourg CIT.

Liquidation proceeds are assimilated to a received dividend and may be exempt under the same conditions. If the conditions of the participation exemption regime are not met, dividends derived by the Company from Qualified Subsidiaries may be exempt for 50% of their gross amount.

Capital gains realized by the Company on shares are subject to CIT and MBT at ordinary rates, unless the conditions of the participation exemption regime, as described below, are satisfied. Under the participation exemption regime, capital gains realized on shares of a Qualified Subsidiary may be exempt from CIT and MBT at the level of the Company if at the time the capital gain is realized, the Company has held or commits itself to hold for an uninterrupted period of at least 12 months’ shares representing a direct participation in the share capital of the Qualified Subsidiary (i) of at least 10%, or (ii) of an acquisition price of at least €6 million (or an equivalent amount in another currency). Taxable gains are defined as the difference between the price for which shares have been disposed of and the lower of their cost or book value.

Withholding Tax

Dividends paid by us to the holders of our ordinary shares are as a rule subject to a 15% withholding tax in Luxembourg, unless a reduced withholding tax rate applies pursuant to an applicable double tax treaty or an exemption pursuant to the application of the withholding tax exemption, and, to the extent withholding tax applies, we are responsible for withholding amounts corresponding to such taxation at its source.

If the Company and a U.S. relevant holder are eligible for the benefits of the tax treaty concluded between the United States and Luxembourg (the “Treaty”), the rate of withholding on distributions shall not exceed 15%, or 5% if the U.S. relevant holder is a qualified resident company as defined in Article 24 of the Treaty that owns at least 10% of our Company’s voting stock.

An exemption may apply under the withholding tax exemption (subject to the relevant anti-abuse rules) if cumulatively (i) the holder of our ordinary shares is an eligible parent (“Eligible Parent”), and (ii) at the time the income is made available, the holder of our ordinary shares has held or commits itself to hold for an uninterrupted period of at least 12 months a direct participation of at least 10% of our share capital or a direct participation of an acquisition price of at least €1.2 million (or an equivalent amount in another currency). Holding a participation through an entity treated as tax transparent from a Luxembourg income tax perspective is deemed to be a direct participation in proportion to the net assets held in this entity. An Eligible Parent includes (i) a company covered by Article 2 of the EU Parent-Subsidiary Directive or a Luxembourg permanent establishment thereof, (ii) a fully-taxable company limited by share capital (*société de capitaux*) resident in Luxembourg, (iii) a company resident in a State having a double tax treaty with Luxembourg and subject to a tax corresponding to Luxembourg CIT or a Luxembourg permanent establishment thereof, (iv) a

company limited by share capital (*société de capitaux*) or a cooperative society (*société coopérative*) resident in the European Economic Area other than an EU Member State and liable to a tax corresponding to Luxembourg CIT or a Luxembourg permanent establishment thereof, or (v) a Swiss company limited by share capital (*société de capitaux*) which is effectively subject to corporate income tax in Switzerland without benefiting from an exemption.

No withholding tax is levied on capital gains and liquidation proceeds.

Net Wealth Tax

The Company is as a rule subject to Luxembourg net wealth tax (“NWT”) on its net assets as determined for net wealth tax purposes. NWT is levied at the rate of 0.5% on net assets not exceeding €500 million and at the rate of 0.05% on the portion of the net assets exceeding €500 million. Net worth is referred to as the unitary value (*valeur unitaire*), as determined at January 1 of each year. The unitary value is in principle calculated as the difference between (i) assets estimated at their fair market value (*valeur estimée de réalisation*), and (ii) liabilities vis-à-vis third parties.

Under the participation exemption regime, a qualified shareholding held by the Company in a Qualified Subsidiary is exempt for net wealth tax purposes.

A minimum net wealth tax (“MNWT”) is levied on companies having their statutory seat or central administration in Luxembourg. For entities for which the sum of fixed financial assets, receivables against related companies, transferable securities, and cash at bank exceeds 90% of their total balance sheet and €350,000, the MNWT is set at €4,815. For all other companies having their statutory seat or central administration in Luxembourg which do not fall within the scope of the €4,815 MNWT, the MNWT ranges from €535 to €32,100, depending on the company’s total balance sheet.

Other Taxes

The issuance of our ordinary shares and any other amendment of our articles of association are currently subject to a €75 fixed registration duty. The disposal of our ordinary shares is not subject to a Luxembourg registration tax or stamp duty, unless recorded in a Luxembourg notarial deed or otherwise registered in Luxembourg.

Taxation of the Holders of Ordinary Shares

Luxembourg Tax Residency of the Holders of Our Ordinary Shares

A holder of our ordinary shares will not become resident, nor be deemed to be resident, in Luxembourg by reason only of the holding and/or disposing of our ordinary shares or the execution, performance, or enforcement of his/her rights thereunder.

Income Tax—Luxembourg Resident Holders

Luxembourg Individual Residents. Dividends and other payments derived from our ordinary shares by resident individual holders of our ordinary shares, who act in the course of the management of either their private wealth or their professional or business activity, are subject to income tax at the ordinary progressive rates. A tax credit is generally granted for withholding taxes levied at source within the limit of the tax payable in Luxembourg on such income, whereby any excess withholding tax is not refundable. 50% of the gross amount of dividends received from the Company by resident individual holders of our ordinary shares are exempt from income tax.

Capital gains realized on the disposal of our ordinary shares by resident individual holders of our ordinary shares, who act in the course of the management of their private wealth, are not subject to income tax, unless said capital gains qualify either as speculative gains or as gains on a substantial participation. Capital gains are deemed to be speculative and are subject to income tax at ordinary rates if our ordinary shares are disposed of within six months after their acquisition or if their disposal precedes their acquisition. Speculative gains are subject to income tax as miscellaneous income at ordinary rates. A participation is deemed to be substantial where a resident individual holder of our ordinary shares holds or has held, either alone or together with his/her spouse or partner and/or minor children, directly or indirectly at any time within the five years preceding the disposal, more than 10% of the share capital of the Company whose ordinary shares are being disposed of. A holder of our ordinary shares also is deemed to alienate a substantial participation if he acquired free of charge, within the five years preceding the transfer, a participation that was constituting a substantial participation in the hands of the alienator (or the alienators in case of successive transfers free of charge within the same five-year period). Capital gains realized on a substantial participation more than six months after the acquisition thereof are taxed according to the half-global rate method, (i.e., the average rate applicable to the total income is calculated according to progressive

income tax rates and half of the average rate is applied to the capital gains realized on the substantial participation). A disposal may include a sale, an exchange, a contribution or any other kind of alienation of the participation.

Capital gains realized on the disposal of our ordinary shares by resident individual holders of our ordinary shares, who act in the course of their professional or business activity, are subject to income tax at ordinary rates. Taxable gains are determined as the difference between the price for which our ordinary shares have been disposed of and the lower of their cost or book value.

Luxembourg Fully-taxable Corporate Residents. Dividends and other payments derived from our ordinary shares by Luxembourg resident fully-taxable companies are subject to CIT and MBT, unless the conditions of the participation exemption regime, as described below, are satisfied. A tax credit is generally granted for withholding taxes levied at source within the limit of the tax payable in Luxembourg on such income, whereby any excess withholding tax is not refundable. If the conditions of the participation exemption regime are not met, 50% of the gross amount of dividends received by Luxembourg resident, fully-taxable companies from our ordinary shares are exempt from CIT and MBT.

Under the participation exemption regime (subject to the relevant anti-abuse rules), dividends derived from our ordinary shares may be exempt from CIT and MBT at the level of the holder of our ordinary shares if cumulatively (i) the holder of our ordinary shares is an Eligible Parent, and (ii) at the time the dividend is put at the holder of our ordinary shares' disposal, the holder of our ordinary shares has held or commits itself to hold for an uninterrupted period of at least 12 months a qualified shareholding ("Qualified Shareholding"). A Qualified Shareholding means ordinary shares representing a direct participation of at least 10% in the share capital of the Company or a direct participation in the Company of an acquisition price of at least €1.2 million (or an equivalent amount in another currency). Liquidation proceeds are assimilated to a received dividend and may be exempt under the same conditions. If the conditions of the participation exemption regime are not met, dividends derived by the Company from Qualified Subsidiaries may be exempt for 50% of their gross amount. Ordinary shares held through a tax-transparent entity are considered as being a direct participation proportionally to the percentage held in the net assets of the transparent entity.

Capital gains realized by a Luxembourg resident fully-taxable company on our ordinary shares are subject to CIT and MBT at ordinary rates, unless the conditions of the participation exemption regime, as described below, are satisfied. Under the participation exemption regime, capital gains realized on our ordinary shares may be exempt from CIT and MBT at the level of the holder of our ordinary shares if cumulatively (i) the holder of our ordinary shares is an Eligible Parent, and (ii) at the time the capital gain is realized, the holder of our ordinary shares has held or commits itself to hold for an uninterrupted period of at least 12 months our ordinary shares representing a direct participation in the share capital of the Company of at least 10% or a direct participation in the Company of an acquisition price of at least €6 million (or an equivalent amount in another currency). Taxable gains are determined as the difference between the price for which our ordinary shares have been disposed of and the lower of their cost or book value.

Luxembourg Residents Benefiting from a Special Tax Regime. Holders of our ordinary shares who are either (i) an undertaking for collective investment governed by the amended law of December 17, 2010, (ii) a specialized investment fund governed by the amended law of February 13, 2007, (iii) a family wealth management company governed by the amended law of May 11, 2007, or (iv) a reserved alternative investment fund treated as a specialized investment fund for Luxembourg tax purposes governed by the amended law of July 23, 2016, are exempt from income tax in Luxembourg. Dividends derived from and capital gains realized on our ordinary shares are thus not subject to Luxembourg income tax in their hands.

Income Tax—Luxembourg Non-Resident Holders

Non-resident holders of our ordinary shares who have neither a permanent establishment nor a permanent representative in Luxembourg to which or whom our ordinary shares are attributable, are not liable to any Luxembourg income tax on income and gains derived from our ordinary shares except capital gains realized on (i) a substantial participation before the acquisition or within the first six months of the acquisition thereof, or (ii) a substantial participation more than six months after the acquisition thereof by a holder of our ordinary shares who has been a former Luxembourg resident for more than 15 years and has become a non-resident, at the time of transfer, less than five years ago. A participation is deemed to be substantial where a shareholder holds or has held, either alone or, in case of an individual shareholder, together with his/her spouse or partner and/or minor children, directly or indirectly at any time within the five years preceding the disposal, more than 10% of the share capital of the Company whose ordinary shares are being disposed of. A shareholder also is deemed to alienate a substantial participation if he acquired free of charge, within the five years preceding the transfer, a participation that was constituting a substantial participation in the hands of the alienator (or the alienators in case of successive transfers free of charge within the same five-year period).

If the Company and a U.S. relevant holder are eligible for the benefits of the Treaty, such U.S. relevant holder generally should not be subject to Luxembourg tax on the gain from the disposal of such ordinary shares unless such gain is attributable to a permanent establishment of such U.S. relevant holder in Luxembourg.

Non-resident holders of our ordinary shares which have a permanent establishment or a permanent representative in Luxembourg to which or whom our ordinary shares are attributable, must include any income received, as well as any gain realized, on the sale, disposal or redemption of our ordinary shares, in their taxable income for Luxembourg tax assessment purposes, unless the conditions of the participation exemption regime, as described below, are satisfied. If the conditions of the participation exemption regime are not fulfilled, 50% of the gross amount of dividends received by a Luxembourg permanent establishment or permanent representative may be, however, exempt from income tax. Taxable gains are determined as the difference between the price for which the ordinary shares have been disposed of and the lower of their cost or book value.

Under the participation exemption regime (subject to relevant anti-abuse rules), dividends derived from our ordinary shares may be exempt from income tax if cumulatively (i) our ordinary shares are attributable to a qualified permanent establishment (“Qualified Permanent Establishment”), and (ii) at the time the dividend is put at the disposal of the Qualified Permanent Establishment, it has held or commits itself to hold a Qualified Shareholding for an uninterrupted period of at least 12 months. A Qualified Permanent Establishment means (i) a Luxembourg permanent establishment of a company covered by Article 2 of the EU Parent-Subsidiary Directive, (ii) a Luxembourg permanent establishment of a company limited by share capital (*société de capitaux*) resident in a State having a tax treaty with Luxembourg, and (iii) a Luxembourg permanent establishment of a company limited by share capital (*société de capitaux*) or a cooperative society (*société coopérative*) resident in the European Economic Area other than a EU Member State. Liquidation proceeds are assimilated to a received dividend and may be exempt under the same conditions. Ordinary shares held through a tax transparent entity are considered as being a direct participation proportionally to the percentage held in the net assets of the transparent entity.

Under the participation exemption regime, capital gains realized on our ordinary shares may be exempt from income tax if (i) our ordinary shares are attributable to a Qualified Permanent Establishment, and (ii) at the time the capital gain is realized, the Qualified Permanent Establishment has held or commits itself to hold, for an uninterrupted period of at least 12 months, our ordinary shares representing a direct participation in the share capital of the Company of at least 10% or a direct participation in the Company of an acquisition price of at least €6 million (or an equivalent amount in another currency). Taxable gains are determined as the difference between the price for which our ordinary shares have been disposed of and the lower of their cost or book value.

Net Wealth Tax

Luxembourg resident holders of our ordinary shares, as well as non-resident holders of our ordinary shares who have a permanent establishment or a permanent representative in Luxembourg to which or whom our ordinary shares are attributable, are subject to Luxembourg NWT on our ordinary shares, except if the holder is (i) a resident or non-resident individual taxpayer, (ii) a securitization company governed by the amended law of March 22, 2004 on securitization, (iii) a company governed by the amended law of June 15, 2004 on venture capital vehicles, (iv) a professional pension institution governed by the amended law of July 13, 2005, (v) a specialized investment fund governed by the amended law of February 13, 2007, (vi) a family wealth management company governed by the amended law of May 11, 2007, (vii) an undertaking for collective investment governed by the amended law of December 17, 2010, or (viii) a reserved alternative investment fund governed by the amended law of July 23, 2016. However, (i) a securitization company governed by the amended law of March 22, 2004 on securitization, (ii) a company governed by the amended law of June 15, 2004 on venture capital vehicles, (iii) a professional pension institution governed by the amended law of July 13, 2005, and (iv) a reserved alternative investment fund treated as a venture capital vehicle for Luxembourg tax purposes and governed by the amended law of July 23, 2016, remain subject to MNWT.

Under the participation exemption, a Qualified Shareholding held in the Company by an Eligible Parent or attributable to a Qualified Permanent Establishment may be exempt. The net wealth tax exemption for a Qualified Shareholding does not require the completion of the 12-month holding period.

Other Taxes

Under Luxembourg tax law, where an individual holder of our ordinary shares is a resident of Luxembourg for inheritance tax purposes at the time of his or her death, our ordinary shares are included in his or her taxable basis for inheritance tax purposes. On the contrary, no inheritance tax is levied on the transfer of our ordinary shares upon the death of an individual holder in cases where the deceased was not a resident of Luxembourg for inheritance purposes.

Gift tax may be due on a gift or donation of our ordinary shares, if the gift is recorded in a Luxembourg notarial deed or otherwise registered in Luxembourg.

U.S. Federal Income Tax Considerations

The following summary describes certain U.S. federal income tax considerations generally applicable to U.S. Holders (as defined below) of our ordinary shares. This summary deals only with our ordinary shares held as capital assets within the meaning of

Section 1221 of the Internal Revenue Code of 1986, as amended (the “Internal Revenue Code”). This summary also does not address the tax consequences that may be relevant to holders in special tax situations including, without limitation, dealers in securities, traders that elect to use a mark-to-market method of accounting, holders that own our ordinary shares as part of a “straddle,” “hedge,” “conversion transaction,” or other integrated investment, banks or other financial institutions, individual retirement accounts and other tax-deferred accounts, insurance companies, tax-exempt organizations, U.S. expatriates, holders whose functional currency is not the U.S. dollar, holders subject to the alternative minimum tax, holders that acquired our ordinary shares in a compensatory transaction, holders subject to special tax accounting rules as a result of any item of gross income with respect to the ordinary shares being taken into account in an applicable financial statement, or holders that actually or constructively own 10% or more of the total voting power or value of our ordinary shares.

This summary is based upon the Internal Revenue Code, applicable U.S. Treasury regulations, administrative pronouncements and judicial decisions, in each case as in effect on the date hereof, all of which are subject to change (possibly with retroactive effect). No ruling will be requested from the Internal Revenue Service (the “IRS”) regarding the tax consequences of the initial listing, and there can be no assurance that the IRS will agree with the discussion set out below. This summary does not address any U.S. federal tax consequences other than U.S. federal income tax consequences (such as the estate and gift tax or the Medicare tax on net investment income).

As used herein, the term “U.S. Holder” means a beneficial owner of our ordinary shares that is, for U.S. federal income tax purposes, (i) a citizen or resident of the United States, (ii) a corporation or other entity taxable as a corporation created or organized under the laws of the United States or any state thereof or therein or the District of Columbia, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust (a) that is subject to the supervision of a court within the United States and the control of one or more United States persons as described in Internal Revenue Code Section 7701(a)(30), or (b) that has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person.

If an entity or other arrangement treated as a partnership for U.S. federal income tax purposes acquires our ordinary shares, the tax treatment of a partner in the partnership generally will depend upon the status of the partner and the activities of the partnership. Partners of a partnership considering an investment in our ordinary shares should consult their tax advisers regarding the U.S. federal income tax consequences of acquiring, owning, and disposing of our ordinary shares.

THE SUMMARY OF U.S. FEDERAL INCOME TAX CONSEQUENCES SET OUT BELOW IS FOR GENERAL INFORMATION ONLY. ALL PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISERS AS TO THE PARTICULAR TAX CONSEQUENCES TO THEM OF OWNING OUR ORDINARY SHARES, INCLUDING THE APPLICABILITY AND EFFECT OF STATE, LOCAL AND NON-U.S. TAX LAWS AND POSSIBLE CHANGES IN TAX LAW.

Dividends

Subject to the discussion below under “—Passive Foreign Investment Company,” the amount of dividends paid to a U.S. Holder with respect to our ordinary shares generally will be included in the U.S. Holder’s gross income as ordinary income from foreign sources to the extent paid out of our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes). Distributions in excess of earnings and profits will be treated as a non-taxable return of capital to the extent of the U.S. Holder’s adjusted tax basis in our ordinary shares and thereafter as capital gain. However, we do not intend to calculate our earnings and profits under U.S. federal income tax principles. Therefore, U.S. Holders should expect that a distribution will generally be treated as a dividend even if that distribution would otherwise be treated as a non-taxable return of capital or as capital gain under the rules described above. The amount of any distribution paid in foreign currency will be equal to the U.S. dollar value of such currency, translated at the spot rate of exchange on the date such distribution is received, regardless of whether the payment is in fact converted into U.S. dollars at that time.

Foreign withholding tax (if any) paid on dividends on our ordinary shares at the rate applicable to a U.S. Holder (taking into account any applicable income tax treaty) will, subject to limitations and conditions, be treated as foreign income tax eligible for credit against such holder’s U.S. federal income tax liability or, at such holder’s election, eligible for deduction in computing such holder’s U.S. federal taxable income. Dividends paid on our ordinary shares generally will constitute “passive category income” for purposes of the foreign tax credit. However, if we are a “United States-owned foreign corporation,” solely for foreign tax credit purposes, a portion of the dividends allocable to our U.S. source earnings and profits may be recharacterized as U.S. source. A “United States-owned foreign corporation” is any foreign corporation in which United States persons own, directly or indirectly, 50% or more (by vote or by value) of the stock. In general, United States-owned foreign corporations with less than 10% of earnings and profits attributable to sources within the United States are excepted from these rules. Although we don’t believe we are currently a “United States-owned foreign corporation,” we may become one in the future. In such case, if 10% or more of our earnings and profits are attributable to sources within the United States, a portion of the dividends paid on our ordinary shares allocable to our U.S. source

earnings and profits will be treated as U.S. source, and, as such, a U.S. Holder may not offset any foreign tax withheld as a credit against U.S. federal income tax imposed on that portion of dividends. The rules governing the treatment of foreign taxes imposed on a U.S. Holder and foreign tax credits are complex, and U.S. Holders should consult their tax advisors about the impact of these rules in their particular situations.

Dividends paid to a non-corporate U.S. Holder by a “qualified foreign corporation” may be subject to reduced rates of taxation if certain holding period and other requirements are met. “Qualified foreign corporation” generally includes a foreign corporation (other than a foreign corporation that is a PFIC (as defined below) with respect to the relevant U.S. Holder for the taxable year in which the dividends are paid or for the preceding taxable year) (i) whose ordinary shares are readily tradable on an established securities market in the United States, or (ii) which is eligible for benefits under a comprehensive U.S. income tax treaty that includes an exchange of information program and which the U.S. Treasury Department has determined is satisfactory for these purposes. Our ordinary shares are expected to be readily tradable on the NYSE, an established securities market. U.S. Holders should consult their own tax advisors regarding the availability of the reduced tax rate on dividends in light of their particular circumstances. The dividends will not be eligible for the dividends received deduction available to corporations in respect of dividends received from other U.S. corporations.

Disposition of Our Ordinary Shares

Subject to the discussion below under “—Passive Foreign Investment Company,” a U.S. Holder generally will recognize capital gain or loss for U.S. federal income tax purposes on the sale or other taxable disposition of our ordinary shares equal to the difference, if any, between the amount realized and the U.S. Holder’s adjusted tax basis in shares. In general, capital gains recognized by a non-corporate U.S. Holder, including an individual, are subject to a lower rate under current law if such U.S. Holder held shares for more than one year. The deductibility of capital losses is subject to limitations. Any such gain or loss generally will be treated as U.S. source income or loss for purposes of the foreign tax credit. A U.S. Holder’s initial tax basis in shares generally will equal the cost of such shares.

If the consideration received upon the sale or other taxable disposition of our ordinary shares is paid in foreign currency, the amount realized will be the U.S. dollar value of the payment received, translated at the spot rate of exchange on the date of taxable disposition. If our ordinary shares are treated as traded on an established securities market, a cash basis U.S. Holder and an accrual basis U.S. Holder who has made a special election (which must be applied consistently from year to year and cannot be changed without the consent of the IRS) will determine the U.S. dollar value of the amount realized in foreign currency by translating the amount received at the spot rate of exchange on the settlement date of the sale. An accrual basis U.S. Holder that does not make the special election will recognize exchange gain or loss to the extent attributable to the difference between the exchange rates on the sale date and the settlement date, and such exchange gain or loss generally will constitute ordinary income or loss.

Passive Foreign Investment Company

In general, a non-U.S. corporation will be classified as a PFIC for any taxable year if at least (i) 75% of its gross income is classified as “passive income,” or (ii) 50% of its assets (determined on the basis of a quarterly average) produce or are held for the production of passive income. For these purposes, cash is considered a passive asset. In making this determination, the non-U.S. corporation is treated as earning its proportionate share of any income and owning its proportionate share of any assets of any corporation in which it holds a 25% or greater interest. Based on our historic and expected operations, composition of assets and market capitalization, we do not expect to be classified as a PFIC for the current table year or for the foreseeable future. However, the determination of whether we are a PFIC is made annually. Moreover, the value of our assets for purposes of the PFIC determination will generally be determined by reference to the public price of our ordinary shares, which may fluctuate significantly. Therefore, there is no assurance that we would not be classified as a PFIC in the future due to, for example, changes in the composition of our assets or income, as well as changes in our market capitalization. Under the PFIC rules, if we were considered a PFIC at any time that a U.S. Holder holds our ordinary shares, we would continue to be treated as a PFIC with respect to such holder’s investment unless (i) we cease to be a PFIC, and (ii) the U.S. Holder has made a “deemed sale” election under the PFIC rules.

If we are considered a PFIC for any taxable year that a U.S. Holder holds our ordinary shares, any gain recognized by the U.S. Holder on a sale or other disposition of our ordinary shares would be allocated pro-rata over the U.S. Holder’s holding period for the ordinary shares. The amounts allocated to the taxable year of the sale or other disposition and to any year before we became a PFIC would be taxed as ordinary income. The amount allocated to each other taxable year would be subject to tax at the highest rate in effect for individuals or corporations, as appropriate, for that taxable year, and an interest charge would be imposed. Further, to the extent that any distribution received by a U.S. Holder on our ordinary shares exceeds 125% of the average of the annual distributions on the ordinary shares received during the preceding three years or the U.S. Holder’s holding period, whichever is shorter, that distribution would be subject to taxation in the same manner as gain on the sale or other disposition of ordinary shares if we were a PFIC, described above. Certain elections may be available that would result in alternative treatments (such as mark-to-market

treatment) of the ordinary shares. If we are treated as a PFIC with respect to a U.S. Holder for any taxable year, the U.S. Holder will be deemed to own shares in any of our subsidiaries that also are PFICs. A timely election to treat us as a qualified electing fund under the Internal Revenue Code would result in an alternative treatment. However, we do not intend to prepare or provide the information that would enable U.S. Holders to make a qualified electing fund election. If we are considered a PFIC, a U.S. Holder also will be subject to annual information reporting requirements. U.S. Holders should consult their own tax adviser about the potential application of the PFIC rules to an investment in the ordinary shares.

Information Reporting and Backup Withholding

Dividend payments and proceeds paid from the sale or other taxable disposition of ordinary shares may be subject to information reporting to the IRS. In addition, a U.S. Holder (other than exempt holders who establish their exempt status if required) may be subject to backup withholding on cash payments received in connection with dividend payments and proceeds from the sale or other taxable disposition of our ordinary shares made within the United States or through certain U.S.-related financial intermediaries.

Backup withholding will not apply, however, to a U.S. Holder who furnishes a correct taxpayer identification number, makes other required certification and otherwise complies with the applicable requirements of the backup withholding rules. Backup withholding is not an additional tax. Rather, any amount withheld under the backup withholding rules will be creditable or refundable against the U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Foreign Financial Asset Reporting

Certain U.S. Holders are required to report their holdings of certain foreign financial assets, including equity of foreign entities, if the aggregate value of all of these assets exceeds certain threshold amounts. The ordinary shares are expected to constitute foreign financial assets subject to these requirements unless the ordinary shares are held in an account at certain financial institutions. U.S. Holders should consult their tax advisors regarding the application of these reporting requirements.

FATCA

Provisions under Sections 1471 through 1474 of the Internal Revenue Code and applicable U.S. Treasury regulations commonly referred to as "FATCA" generally impose 30% withholding on certain "withholdable payments" and, in the future, may impose such withholding on "foreign passthru payments" made by a "foreign financial institution" (each as defined in the Internal Revenue Code) that has entered into an agreement with the IRS to perform certain diligence and reporting obligations with respect to the foreign financial institution's U.S.-owned accounts. The United States has entered into an intergovernmental agreement, or IGA, with Luxembourg, implemented by the Luxembourg law dated July 24, 2015, which modifies the FATCA withholding regime described above. It is not yet clear how foreign passthru payments will be addressed under FATCA. Under proposed regulations, any withholding on foreign passthru payments would apply to passthru payments made on or after the date that is two years after the date of publication in the Federal Register of applicable final regulations defining foreign passthru payments. Although these recent regulations are not final, taxpayers generally may rely on them until final regulations are issued. Prospective investors should consult their tax advisors regarding the potential impact of FATCA, the Luxembourg IGA and any non-U.S. legislation implementing FATCA on the investment in our ordinary shares.

F. Dividends and Paying Agents

Not applicable

G. Statements by Experts

Not applicable

H. Documents on Display

Our SEC filings are available to you on the SEC's website at <http://www.sec.gov>. This site contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. The information on that website is not part of this report.

We also make available on the Investors section of our website, free of charge, our annual reports on Form 20-F and the text of our reports on Form 6-K, including any amendments to these reports, as well as certain other SEC filings, as soon as reasonably

practicable after they are electronically filed with or furnished to the SEC. Our website address is www.spotify.com. The information on that website is not part of this report.

I. Subsidiary Information

Not applicable

Item 11. Quantitative and Qualitative Disclosures About Market Risk

Our activities expose us to a variety of market risks. Our primary market risk exposures relate to currency, interest rate, share price and investment risks. To manage these risks and our exposure to the unpredictability of financial markets, we seek to minimize potential adverse effects on our financial performance and capital.

Financial risk management

The Group's operations are exposed to financial risks. To manage these risks efficiently, the Group has established guidelines in the form of a treasury policy that serves as a framework for the daily financial operations. The treasury policy stipulates the rules and limitations for the management of financial risks.

Financial risk management is centralized within Treasury who are responsible for the management of financial risks. Treasury manages and executes the financial management activities, including monitoring the exposure of financial risks, cash management, and maintaining a liquidity reserve, and it provides certain financial services to the Group's entities. Treasury operates within the limits and policies authorized by the board of directors.

Currency Risk

Currency risk manifests itself in transaction exposure, which relates to business transactions denominated in foreign currency required by operations (purchasing and selling) and/or financing (interest and amortization). Our general policy is to hedge transaction exposure on a case-by-case basis. Translation exposure relates to net investments in foreign operations. We do not conduct translation risk hedging.

The Group will be subject to deferred tax in future periods as a result of foreign exchange movements between USD, EUR, and SEK, primarily related to its investment in TME.

Transaction Exposure Sensitivity

In most cases, our customers are billed in their respective local currency. Major payments, such as salaries, consultancy fees, and rental fees are settled in local currencies. Royalty payments are primarily settled in Euros and U.S. dollars. Hence, the operational need to net purchase foreign currency is due primarily to a deficit from such settlements.

The table below shows the immediate impact on net income before tax of a 10% strengthening in the closing exchange rate of significant currencies to which we have transaction exposure at December 31, 2019. The sensitivity associated with a 10% weakening of a particular currency would be equal and opposite. This assumes that each currency moves in isolation.

2019	SEK	USD
	(in € millions)	
(Increase)/decrease in loss before tax	(13)	121

Translation Exposure Sensitivity

The impact on our equity would be approximately €50 million if the Euro weakened by 10% against all translation exposure currencies, based on the exposure at December 31, 2019.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will have a negative impact on earnings and cash flow.

Our exposure to interest rate risk is related to our interest-bearing assets, primarily our short term debt securities. Fluctuations in interest rates impact the yield of the investment. The sensitivity analysis considered the historical volatility of short term interest rates

and determined that it was reasonably possible that a change of 100 basis points could be experienced in the near term. A hypothetical 100 basis point increase in interest rates would have impacted interest income by €6 million for the year ended December 31, 2019.

Share Price Risk

Share price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in the fair value of the Company's ordinary share price. Our exposure to this risk relates primarily to the outstanding warrants.

The impact on the fair value of the warrants with an increase or decrease in the Company's ordinary share price of 10% would have resulted in a range of €127 million to €75 million at December 31, 2019.

The impact on the accrual for social costs on outstanding share-based payment awards of an increase or decrease in the Company's ordinary share price of 10% would have resulted in a change of €14 million at December 31, 2019.

Investment Risk

We are exposed to investment risk as it relates to changes in the market value of our long term investments, due primarily to volatility in the share price used to measure the investment and exchange rates. The majority of our long term investments relate to TME. The impact on the fair value of the Group's long term investment in TME using reasonably possible alternative assumptions with an increase or decrease of TME's share price used to value our equity interest of 10% results in a range of €1,333 million to €1,629 million at December 31, 2019.

Item 12. Description of Securities Other Than Equity Securities

Not applicable.

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depositary Shares

Not applicable.

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies

None

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

None

Item 15. Controls and Procedures

A. Disclosure Controls and Procedures

As required by Rules 13a-15(b) and 15d-15(b) under the Exchange Act, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of the end of the period covered by this Annual Report on Form 20-F. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2019, our disclosure controls and procedures were effective at the reasonable assurance level.

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating and implementing possible controls and procedures.

B. Management's annual report on internal control over financial reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act). Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2019. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013). Based on our assessment, our management concluded that our internal control over financial reporting was effective as of December 31, 2019. The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by Ernst & Young AB, an independent registered public accounting firm, as stated in their report that is included herein.

The effectiveness of any system of internal control over financial reporting is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting can only provide reasonable, not absolute, assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure that such improvements will be sufficient to provide us with effective internal control over financial reporting.

C. Attestation report of the registered public accounting firm

Please see the report of Ernst & Young AB, an independent registered public accounting firm, included in "Item 18. Financial Statements."

D. Changes in internal control over financial reporting

We previously identified a material weakness in our internal control over financial reporting that related to accounting for rights holder liabilities. During 2019, we took a number of actions designed to remediate this material weakness, including the hiring of additional accounting, finance, system engineers, and data analysts, and the implementation of new controls, processes, and technologies over the calculation, processing, reconciliations, and analysis of right holder liabilities. Based on the testing of the operating effectiveness of these controls completed to date, as of December 31, 2019, the previously identified material weakness has been remediated.

Other than the changes described above, there were no changes to our internal control over financial reporting during the year ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 16A. Audit Committee Financial Expert

Our board of directors has determined that Mr. Thomas Staggs is an “audit committee financial expert,” as defined in Item 16A of Form 20-F. All audit committee members satisfy the independence requirements set forth under the rules of the NYSE and in Rule 10A-3 under the Exchange Act.

Item 16B. Code of Ethics

We have adopted the Spotify Code of Conduct and Ethics, which applies to all of directors, officers, employees, consultants and others working on our behalf, and is intended to meet the definition of “code of ethics” under Item 16B of Form 20-F. The Spotify Code of Conduct and Ethics is available on our website at investors.spotify.com. We intend to disclose on our website any amendments to or waivers of the Spotify Code of Conduct and Ethics.

Item 16C. Principal Accountant Fees and Services

Ernst & Young AB have acted as our principal accountants for the years ended December 31, 2019 and 2018, respectively. The following table summarizes the charge for professional fees rendered in those periods:

	2019	2018
	(in € thousands)	
Audit fees	4,920	3,900
Audit-related fees	425	58
Tax fees	82	50
All other fees	—	92
Total	5,427	4,100

“Audit fees” are the aggregate fees earned by the Ernst & Young entities for the audit of our consolidated annual financial statements, reviews of interim financial statements and attestation services that are provided in connection with statutory and regulatory filings or engagements. “Audit-related fees” are fees charged by the Ernst & Young entities for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and are not reported under “Audit fees.” This category comprises fees for internal control reviews, agreed-upon procedure engagements and other attestation services subject to regulatory requirements. “Tax Fees” include fees billed for tax compliance, tax advice and tax planning services. “All other fees” are the fees for products and services other than those in the above three categories.

The Company’s audit committee approves all auditing services and permitted non-audit services performed for the Company by its independent auditor in advance of an engagement. All auditing services and permitted non-audit services to be performed for the Company by its independent auditor must be approved by the Committee in advance to ensure that such engagements do not impair the independence of our independent registered public accounting firm. All audit-related service fees and tax fees were approved by the Audit Committee.

Item 16D. Exemptions from the Listing Standards for Audit Committees

None

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

In November 2018, the board of directors approved a share repurchase program of the Company's ordinary shares up to the amount of \$1.0 billion. Repurchases of up to 10,000,000 of the Company's ordinary shares were authorized by the Company's general meeting of shareholders on April 21, 2016. The repurchase program will expire on April 21, 2021. The timing and actual number of shares repurchased will depend on a variety of factors, including price, general business and market conditions, and alternative investment opportunities. The repurchase program will be executed consistent with the Company's capital allocation strategy of prioritizing investment to grow the business over the long term.

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs	Maximum Value of Shares that May Yet Be Purchased Under the Plans or Programs
2019					
January	431,941	\$ 126.74	431,941	8,880,788	\$857,966,803
February	349,646	\$ 142.00	349,646	8,531,142	\$808,317,006
March	237,822	\$ 142.19	237,822	8,293,320	\$774,500,558
April	—	\$ —	—	8,293,320	\$774,500,558
May	718,935	\$ 131.25	718,935	7,574,385	\$680,140,410
June	653,961	\$ 141.52	653,961	6,920,424	\$587,594,128
July	67,820	\$ 145.17	67,820	6,852,604	\$577,748,703
August	—	\$ —	—	6,852,604	\$577,748,703
September	1,062,805	\$ 124.44	1,062,805	5,789,799	\$445,488,432
October	156,226	\$ 113.55	156,226	5,633,573	\$427,748,748
November	—	\$ —	—	5,633,573	\$427,748,748
December	—	\$ —	—	5,633,573	\$427,748,748
Total	3,679,156	\$ 131.81	3,679,156	5,633,573	\$427,748,748

(1) The column includes all the shares repurchased as a part of the repurchase program announced on November 5, 2018, as further described above. As of December 31, 2019, we had repurchased a total of approximately \$572 million under the share repurchase program.

During the year ended December 31, 2019, the average price paid per share for share repurchases was €117.69, translated into Euro from U.S. Dollars at the exchange rates as published by Reuters on the respective transaction dates. As of December 31, 2019, the maximum value of shares that may yet be purchased under the share repurchase program is approximately €382 million, translated into Euro from U.S. Dollars at the exchange rate as published by Reuters on December 31, 2019.

Item 16F. Change in Registrant's Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

Our common shares are listed on the NYSE. For purposes of NYSE rules, so long as we are a foreign private issuer, we are eligible to take advantage of certain exemptions from NYSE corporate governance requirements provided in the NYSE rules. We are required to disclose the significant ways in which our corporate governance practices differ from those that apply to U.S. companies under NYSE listing standards. Set forth below is a summary of these differences:

Board Committees—The NYSE rules require domestic companies to have a compensation committee and a nominating and corporate governance committee composed entirely of independent directors, but as a foreign private issuer we are exempt from these requirements. We have a remuneration committee comprised of three members, and we believe that two of the committee members satisfy the "independence" requirements of the NYSE rules. We do not have a nominating and corporate governance committee.

Item 16H. Mine Safety Disclosure

Not applicable.

PART III

Item 17. Financial Statements

See Item 18.

Item 18. Financial Statements

The audited Consolidated Financial Statements as required under Item 18 are attached hereto starting on page F-1 of this Form 20-F.

Item 19. Exhibits

The following are filed as exhibits hereto:

- 1.1 Amended and Restated Articles of Association of Spotify Technology S.A. (English Translation), as currently in effect.
- 2.1 Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.
- 4.1 Form of Terms and Conditions for Warrants 2019 in Spotify Technology S.A.
- 4.2 Form of Terms and Conditions for Warrants 2017 in Spotify Technology S.A. (filed as Exhibit 10.2 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.3 Form of Terms and Conditions for Warrants 2016 in Spotify Technology S.A. (filed as Exhibit 10.1 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.4 Terms and Conditions Governing Employee Stock Options 2020/2025 in Spotify Technology S.A., dated January 1, 2020 (filed as Exhibit 99.1 to Spotify Technology S.A.'s Form S-8 filed on December 30, 2019, File No. 333-235746, and incorporated herein by reference).
- 4.5 Terms and Conditions Governing Employee Stock Options 2019/2024 in Spotify Technology S.A., dated January 1, 2019 (filed as Exhibit 4.3 to Spotify Technology S.A.'s Annual Report on Form 20-F filed on February 12, 2019, File No. 001-38438, and incorporated herein by reference).
- 4.6 Terms and Conditions Governing Employee Stock Options 2019/2024 Interim in Spotify Technology S.A., dated January 1, 2019 (filed as Exhibit 4.4 to Spotify Technology S.A.'s Annual Report on Form 20-F filed on February 12, 2019, File No. 001-38438, and incorporated herein by reference).
- 4.7 Terms and Conditions Governing Employee Stock Options 2018/2023 in Spotify Technology S.A., dated January 1, 2018 (filed as Exhibit 10.3 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.8 Terms and Conditions Governing Employee Stock Options 2017/2022 in Spotify Technology S.A., dated December 2, 2016 (filed as Exhibit 10.4 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.9 Terms and Conditions Governing Employee Stock Options 2016/2021 in Spotify Technology S.A., dated January 1, 2016 (filed as Exhibit 10.5 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.10 Terms and Conditions Governing Employee Stock Options 2015/2020 in Spotify Technology S.A., dated March 1, 2015 (filed as Exhibit 10.6 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).

- 4.11 Terms and Conditions Governing Employee Stock Options 2014/2019 in Spotify Technology S.A., dated March 1, 2014 (filed as Exhibit 10.7 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.12 Terms and Conditions Governing Employee Restricted Stock Units 2020/2025 in Spotify Technology S.A., dated January 1, 2020 (filed as Exhibit 99.2 to Spotify Technology S.A.'s Form S-8 filed on December 30, 2019, File No. 333-235746, and incorporated herein by reference).
- 4.13 Terms and Conditions Governing Restricted Stock Units 2019/2024 in Spotify Technology S.A., dated January 1, 2019 (filed as Exhibit 4.10 to Spotify Technology S.A.'s Annual Report on Form 20-F filed on February 12, 2019, File No. 001-38438, and incorporated herein by reference).
- 4.14 Terms and Conditions Governing Restricted Stock Units 2018/2023 in Spotify Technology S.A., dated January 1, 2018 (filed as Exhibit 10.8 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.15 Terms and Conditions Governing Restricted Stock Units 2017/2022 in Spotify Technology S.A., dated June 1, 2017 (filed as Exhibit 10.9 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.16 Terms and Conditions Governing Restricted Stock Units 2016/2021 in Spotify Technology S.A., dated June 1, 2016 (filed as Exhibit 10.10 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.17 Terms and Conditions Governing Restricted Stock Units 2015/2020 in Spotify Technology S.A., dated June 1, 2015 (filed as Exhibit 10.11 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.18 Terms and Conditions Governing Restricted Stock Units 2014/2019 in Spotify Technology S.A., dated October 1, 2014 (filed as Exhibit 10.12 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.19 Terms and Conditions Governing Director Stock Options 2019/2023 in Spotify Technology S.A., dated April 19, 2019 (filed as Exhibit 99.1 to Spotify Technology S.A.'s Form S-8 filed on April 29, 2019, File No. 333-231102, and incorporated herein by reference).
- 4.20 Terms and Conditions Governing Director Restricted Stock Units 2019/2023 in Spotify Technology S.A., dated April 19, 2019 (filed as Exhibit 99.2 to Spotify Technology S.A.'s Form S-8 filed on April 29, 2019, File No. 333-231102, and incorporated herein by reference).
- 4.21 Terms and Conditions Governing Director Restricted Stock Units 2018/2022 in Spotify Technology S.A., dated February 28, 2018 (filed as Exhibit 10.13 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.22 Terms and Conditions Governing Director Restricted Stock Units 2017/2021 in Spotify Technology S.A., dated June 30, 2017 (filed as Exhibit 10.14 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.23 Terms and Conditions Governing Director Restricted Stock Units 2016/2020 in Spotify Technology S.A., dated September 30, 2016 (filed as Exhibit 10.15 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.24 The Echo Nest Corporation 2007 Stock Option and Grant Plan (filed as Exhibit 10.16 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.25 Form of Incentive Stock Option Agreement under The Echo Nest Corporation 2007 Stock Option and Grant Plan, by and between The Echo Nest Corporation and optionees (filed as Exhibit 10.17 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).

- 4.26 Terms and Conditions Governing Stock Options for Consultants 2020/2025 in Spotify Technology S.A. (filed as Exhibit 99.3 to Spotify Technology S.A.'s Form S-8 filed on December 30, 2019, File No. 333-235746, and incorporated herein by reference).
- 4.27 Terms and Conditions Governing Restricted Stock Units for Consultants 2020/2025 in Spotify Technology S.A. (filed as Exhibit 99.4 to Spotify Technology S.A.'s Form S-8 filed on December 30, 2019, File No. 333-235746, and incorporated herein by reference).
- 4.28 Form of Notice of Conversion of Echo Nest Stock Options, by and between Spotify Technology S.A. and certain employees (filed as Exhibit 10.18 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 4.27 Form of Restricted Consideration Agreement, by and between Spotify Technology S.A. and restricted sellers (filed as Exhibit 10.19 to Spotify Technology S.A.'s Form F-1 filed on February 28, 2018, File No. 333-223300, and incorporated herein by reference).
- 8.1 List of Subsidiaries.
- 12.1 Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer.
- 12.2 Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer.
- 13.1 Certification of Chief Executive Officer Under Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.
- 13.2 Certification of Chief Financial Officer Under Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.
- 15.1 Consent of Ernst & Young AB.
- 101 Interactive Data Files.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Spotify Technology S.A.

By: /s/ Paul Vogel

Name: Paul Vogel

Title: Chief Financial Officer

Date: February 12, 2020

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Spotify Technology S.A.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Spotify Technology S.A. (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive (loss)/income, changes in equity/(deficit) and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 12, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Cost of revenue and rights holder liabilities

Description of the Matter For the year ended December 31, 2019, the Company's cost of revenue was €5,042 million, trade payables was €377 million and accrued fees to rights holders was €1,153 million. As explained in Note 2 in the consolidated financial statements, cost of revenue and rights holder liabilities consist predominantly of royalty and distribution costs related to content streaming. Royalties are typically calculated using negotiated rates and are based on revenue, user/usage measures, or a combination of these. Calculation variables include the country, product, license holder and size of user base.

Auditing cost of revenue and rights holder liabilities was complex due to the nature of the calculation and variables used to determine royalties. There was significant auditor judgment when assessing management's estimates and assumptions in circumstances where rights holders have several years to claim royalties for musical compositions.

*How We
Addressed the
Matter in Our
Audit*

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's processes to determine cost of revenue and rights holder liabilities. For example, we tested controls specific to the calculation of royalties, calculation variables, and estimates and assumptions used to determine royalties claimed by rights holders where rights holders have several years to claim.

We performed the following audit procedures, among others, related to cost of revenue and rights holder liabilities: recalculated royalty cost amounts, vouched royalty cost variables, tested claim data and performed sensitivity analyses. Additionally, we developed an independent expectation and evaluated the appropriateness and consistency of management's estimates and assumptions used to determine royalties where rights holders have several years to claim.

/s/ Ernst & Young AB

We have served as the Company's auditor since 2015.

Stockholm, Sweden

February 12, 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Spotify Technology S.A.

Opinion on Internal Control Over Financial Reporting

We have audited Spotify Technology S.A.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Spotify Technology S.A. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statements of financial position of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive (loss)/income, changes in equity/(deficit) and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated February 12, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young AB

Stockholm, Sweden

February 12, 2020

Consolidated statement of operations

for the year ended December 31

(in € millions, except share and per share data)

	Note	2019	2018	2017
Revenue	4	6,764	5,259	4,090
Cost of revenue		5,042	3,906	3,241
Gross profit		1,722	1,353	849
Research and development		615	493	396
Sales and marketing		826	620	567
General and administrative		354	283	264
		1,795	1,396	1,227
Operating loss		(73)	(43)	(378)
Finance income	9	275	455	118
Finance costs	9	(333)	(584)	(974)
Share in (losses)/earnings of associate		—	(1)	1
Finance income/(costs) - net		(58)	(130)	(855)
Loss before tax		(131)	(173)	(1,233)
Income tax expense/(benefit)	10	55	(95)	2
Net loss attributable to owners of the parent		(186)	(78)	(1,235)
Net loss per share attributable to owners of the parent				
Basic	11	(1.03)	(0.44)	(8.14)
Diluted	11	(1.03)	(0.51)	(8.14)
Weighted-average ordinary shares outstanding				
Basic	11	180,960,579	177,154,405	151,668,769
Diluted	11	180,960,579	181,210,292	151,668,769

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of comprehensive (loss)/income

for the year ended December 31

(in € millions)

	Note	2019	2018	2017
Net loss attributable to owners of the parent		(186)	(78)	(1,235)
Other comprehensive (loss)/income:				
<i>Items that may be subsequently reclassified to consolidated statement of operations (net of tax):</i>				
Change in net unrealized gain or loss on short term investments	17, 23	5	1	(1)
Change in net unrealized gain or loss on cash flow hedging instruments	17, 23	(3)	(1)	—
Exchange differences on translation of foreign operations		4	(8)	(3)
<i>Items not to be subsequently reclassified to consolidated statement of operations (net of tax):</i>				
(Loss)/gain in the fair value of long term investments	17, 23	(117)	572	(11)
Other comprehensive (loss)/income for the year (net of tax)		(111)	564	(15)
Total comprehensive (loss)/income for the year attributable to owners of the parent		(297)	486	(1,250)

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of financial position

As at December 31

(in € millions)

	Note	2019	2018
Assets			
Non-current assets			
Lease right-of-use assets	12	489	—
Property and equipment	13	291	197
Goodwill	14	478	146
Intangible assets	14	58	28
Long term investments	23	1,497	1,646
Restricted cash and other non-current assets	15	69	65
Deferred tax assets	10	9	8
		2,891	2,090
Current assets			
Trade and other receivables	16	402	400
Income tax receivable	10	4	2
Short term investments	23	692	915
Cash and cash equivalents	23	1,065	891
Other current assets		68	38
		2,231	2,246
Total assets		5,122	4,336
Equity and liabilities			
Equity			
Share capital	17	—	—
Other paid in capital	17	4,192	3,801
Treasury shares	17	(370)	(77)
Other reserves	17	924	875
Accumulated deficit		(2,709)	(2,505)
Equity attributable to owners of the parent		2,037	2,094
Non-current liabilities			
Lease liabilities	12	622	—
Accrued expenses and other liabilities	21	20	85
Provisions	22	2	6
Deferred tax liabilities	10	2	2
		646	93
Current liabilities			
Trade and other payables	20	549	427
Income tax payable	10	9	7
Deferred revenue	4	319	258
Accrued expenses and other liabilities	21	1,438	1,076
Provisions	22	13	42
Derivative liabilities	23	111	339
		2,439	2,149
Total liabilities		3,085	2,242
Total equity and liabilities		5,122	4,336

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of changes in equity/(deficit)

(in € millions, except share data)

	Note	Number of ordinary shares outstanding	Share capital	Treasury shares	Other paid in capital	Other reserves	Accumulated deficit	Equity/ (Deficit) attributable to owners of the parent
Balance at January 1, 2017		149,924,000	—	—	830	122	(1,192)	(240)
Loss for the year		—	—	—	—	—	(1,235)	(1,235)
Other comprehensive loss		—	—	—	—	(15)	—	(15)
Issuance of shares upon exercise of stock options and restricted stock units	17	1,723,080	—	—	29	—	—	29
Issuance of shares related to business combinations	5	442,040	—	—	33	—	—	33
Issuance of restricted share awards related to business combination	5	61,880	—	—	—	—	—	—
Issuance of shares upon exchange of Convertible Notes	23	6,554,960	—	—	686	—	—	686
Issuance of shares in exchange for long term investment	23	8,552,440	—	—	910	—	—	910
Share-based payments	18	—	—	—	—	67	—	67
Income tax impact associated with share-based payments	10	—	—	—	—	3	—	3
Balance at December 31, 2017		167,258,400	—	—	2,488	177	(2,427)	238
Loss for the year		—	—	—	—	—	(78)	(78)
Other comprehensive income		—	—	—	—	564	—	564
Issuance of ordinary shares		5,776,920	—	—	4	—	—	4
Repurchases of ordinary shares	17	(6,427,271)	—	(77)	—	—	—	(77)
Issuance of shares upon exercise of stock options and restricted stock units	17	4,816,072	—	—	163	—	—	163
Restricted stock units withheld for employee taxes		—	—	—	—	(2)	—	(2)
Issuance of shares upon exchange of Convertible Notes	23	9,431,960	—	—	1,146	—	—	1,146
Share-based payments	18	—	—	—	—	88	—	88
Income tax impact associated with share-based payments	10	—	—	—	—	48	—	48
Balance at December 31, 2018		180,856,081	—	(77)	3,801	875	(2,505)	2,094
Cumulative effect adjustment in connection with the adoption of IFRS 16	12	—	—	—	—	—	(18)	(18)
Balance at January 1, 2019		180,856,081	—	(77)	3,801	875	(2,523)	2,076
Loss for the year		—	—	—	—	—	(186)	(186)
Other comprehensive loss		—	—	—	—	(111)	—	(111)
Repurchases of ordinary shares	17	(3,679,156)	—	(433)	—	—	—	(433)
Issuance of shares upon exercise of stock options and restricted stock units	17	3,557,405	—	140	14	—	—	154
Issuance of shares upon exercise of, or net settlement of, warrants	23	3,591,627	—	—	377	—	—	377
Issuance of share-based payments in conjunction with business combinations	5	—	—	—	—	13	—	13
Restricted stock units withheld for employee taxes		—	—	—	—	(6)	—	(6)
Share-based payments	18	—	—	—	—	127	—	127
Income tax impact associated with share-based payments	10	—	—	—	—	26	—	26
Balance at December 31, 2019		184,325,957	—	(370)	4,192	924	(2,709)	2,037

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated statement of cash flows
for the year ended December 31
(in € millions)

	Note	2019	2018	2017
Operating activities				
Net loss		(186)	(78)	(1,235)
Adjustments to reconcile net loss to net cash flows				
Depreciation of property and equipment and lease right-of-use assets	12, 13	71	21	46
Amortization of intangible assets	14	16	11	8
Share-based payments expense	18	122	88	65
Finance income	9	(275)	(455)	(118)
Finance costs	9	333	584	974
Income tax expense/(benefit)	10	55	(95)	2
Other		13	8	(4)
Changes in working capital:				
Increase in trade receivables and other assets		(27)	(61)	(112)
Increase in trade and other liabilities		454	291	447
Increase in deferred revenue		59	38	77
(Decrease)/Increase in provisions		(35)	(17)	8
Interest paid on lease liabilities		(37)	—	—
Interest received		14	18	19
Income tax (paid)/received		(4)	(9)	2
Net cash flows from operating activities		573	344	179
Investing activities				
Business combinations, net of cash acquired	5	(331)	(9)	(49)
Purchases of property and equipment	13	(135)	(125)	(36)
Purchases of short term investments	23	(901)	(1,069)	(1,386)
Sales and maturities of short term investments	23	1,163	1,226	1,080
Change in restricted cash	15	2	(10)	(34)
Other		(16)	(35)	(10)
Net cash flows used in investing activities		(218)	(22)	(435)
Financing activities				
Payments of lease liabilities	12	(17)	—	—
Lease incentives received	12	15	—	—
Repurchases of ordinary shares	17	(438)	(72)	—
Proceeds from exercise of stock options	18	154	163	29
Proceeds from exercise of warrants	23	74	—	—
Proceeds from issuance of warrants	23	15	—	9
Other		(6)	1	(4)
Net cash flows (used in)/from financing activities		(203)	92	34
Net increase/(decrease) in cash and cash equivalents		152	414	(222)
Cash and cash equivalents at January 1	23	891	477	755
Net foreign exchange gains/(losses) on cash and cash equivalents		22	—	(56)
Cash and cash equivalents at December 31	23	1,065	891	477
Supplemental disclosure of cash flow information				
Non-cash investing and financing activities				
Issuance of shares for business combinations		—	—	33
Lease right-of-use assets obtained in exchange for lease liabilities	12	136	—	—
Purchases of property and equipment in trade and other payables	13	14	23	5
Issuance of shares upon exercise of, or net settlement of, warrants	23	303	—	—
Issuance of shares upon exchange of Convertible Notes	23	—	1,145	686
Issuance of shares in exchange for long term investment	23	—	—	910

The accompanying notes are an integral part of these consolidated financial statements.

Notes to the 2019 consolidated financial statements

1. Corporate information

Spotify Technology S.A. (the “Company” or “parent”) is a public limited company incorporated and domiciled in Luxembourg. The Company’s registered office is 42-44 avenue de la Gare, L1610, Luxembourg, Grand Duchy of Luxembourg.

The principal activity of the Company and its subsidiaries (the “Group”) is audio streaming. The Group’s premium service (“Premium Service”) provides users with unlimited online and offline high-quality streaming access to its catalog of music and podcasts. The Premium Service offers a music listening experience without commercial breaks. The Group’s ad-supported service (“Ad-Supported Service,” and together with the Premium Service, the “Service”) has no subscription fees and generally provides users with limited on-demand online access to the catalog of music and unlimited online access to the catalog of podcasts. The Group depends on securing content licenses from a number of major and minor content owners and other rights holders in order to provide its service.

2. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Basis of preparation

The consolidated financial statements of Spotify Technology S.A. comply with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”) and have been prepared on a historical cost basis, except for securities, long term investments, convertible senior notes (“Convertible Notes”), derivative financial instruments, and contingent consideration, which have been measured at fair value, and lease liabilities, which are measured at present value.

The preparation of the consolidated financial statements in conformity with IFRS requires the application of certain critical accounting estimates and assumptions. It also requires management to exercise its judgment in the process of applying the accounting policies. The areas involving a greater degree of judgment or complexity, or areas in which assumptions and estimates are significant to the consolidated financial statements, are disclosed in Note 3.

The consolidated financial statements provide comparative information in respect of the previous periods. On January 1, 2019, the Group adopted IFRS 16, *Leases*, using the modified retrospective approach. See Note 12 for further information on comparability following the adoption.

(b) Basis of consolidation

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

(c) Foreign currency translation

Functional and reporting currency

Items included in the financial statements of each of the Group’s entities are measured using the currency of the primary economic environment in which the entity operates. The consolidated financial statements are presented in Euro, which is the Group’s reporting currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year-end exchange rates are recognized in the consolidated statement of operations within finance income or finance costs.

Group companies

The results and financial position of all the Group entities that have a functional currency different from the presentation currency are translated into Euro as follows:

- Assets and liabilities are translated at the closing rate at the reporting date;
- Income and expenses for each statement of operation are translated at average exchange rates; and
- All resulting exchange differences are recognized in other comprehensive income/(loss).

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the operation and translated at the closing rate at each reporting date.

(d) Revenue recognition

Premium revenue

The Group generates subscription revenue from the sale of the Premium Service in which customers can listen on-demand and offline. Premium Services are sold directly to end users and through partners who are generally telecommunications companies that bundle the subscription with their own services or collect payment for the stand-alone subscriptions from their end customers. The Group satisfies its performance obligation, and revenue from these services is recognized, on a straight-line basis over the subscription period. Typically, Premium Services are paid for monthly in advance.

Premium partner subscription revenue is based on a per-subscriber rate in a negotiated partner agreement. Under these arrangements, a premium partner may bundle the Premium Service with its existing product offerings or offer the Premium Service as an add-on. Payment is remitted to the Group through the premium partner. The Group assesses the facts and circumstances, including whether the partner is acting as a principal or agent, of all partner revenue arrangements and then recognizes revenues either gross or net. Premium partner services, whether recognized gross or net, have one material performance obligation, that being the delivery of the Premium Service.

Additionally, the Group bundles the Premium Service with third-party services and products. In bundle arrangements where the Group has multiple performance obligations, the transaction price is allocated to each performance obligation based on the relative stand-alone selling price. The Group generally determines stand-alone selling prices based on the prices charged to customers. For each performance obligation within the bundle, revenue is recognized either on a straight-line basis over the subscription period or at a point in time when control of the service or product is transferred to the customer.

Ad-Supported revenue

The Group's advertising revenue is primarily generated through display, audio, and video advertising delivered through advertising impressions and podcast downloads. The Group enters into arrangements with advertising agencies that purchase advertising on its platform on behalf of the agencies' clients. These advertising arrangements are typically sold on a cost-per-thousand basis and are evidenced by an Insertion Order ("IO") that specifies the terms of the arrangement such as the type of ad product, pricing, insertion dates, and number of impressions in a stated period. Revenue is recognized over time based on the number of impressions delivered. The Group also may offer cash rebates to advertising agencies based on the volume of advertising inventory purchased. These rebates are estimated based on expected performance and historical data and result in a reduction of revenue recognized.

Additionally, the Group generates Ad-Supported revenue through arrangements with certain advertising exchange platforms to distribute advertising inventory for purchase on a cost-per-thousand basis through their automated exchange. Revenue is recognized over time when impressions are delivered on the platform.

(e) Advertising credits

Advertising credits that are not transferable are issued to certain rights holders and allow them to include advertisement on the Ad-Supported Service that promote their artists and the Spotify service, such as the availability of a new single or album on Spotify. These are issued in conjunction with the Group's royalty arrangements for nil consideration. There is no revenue recognized as the advertising credits are mutually beneficial to both the rights holders and the Group and do not meet the definition of a revenue contract under IFRS 15, *Revenue from Contracts with Customers*.

(f) Business combinations

Business combinations are accounted for using the acquisition method. Identifiable assets acquired and liabilities assumed are measured initially at their fair values at the acquisition date. The excess of the consideration transferred, and the acquisition-date fair value of any previous equity interest in the acquiree, over the fair value of the identifiable net assets acquired is recognized as goodwill.

In some business combinations, the Group will replace awards held by the employees of the acquiree with its share-based payment awards, whereby the vesting of the Group's replacement awards is contingent on continued employment with the Group. Replacements of share-based payment awards are accounted for as modifications of the acquiree's existing share-based payment awards. The value of the replaced acquiree award at acquisition date that relates to pre-combination service is accounted for as part of the consideration transferred. The excess of the value of the Group's replacement award over the amount attributed to pre-combination services is recognized in the consolidated statement of operations, together with a corresponding credit to other reserves in equity, over the period in which the service conditions are fulfilled.

Acquisition-related costs, other than those incurred for the issuance of debt or equity instruments, are charged to the consolidated statement of operations as they are incurred.

(g) Cost of revenue

Cost of revenue consists predominantly of royalty and distribution costs related to content streaming. The Group incurs royalty costs paid to certain music record labels, music publishers, and other rights holders for the right to stream music to the Group's users. Royalties are typically calculated using negotiated rates in accordance with license agreements and are based on either subscription and advertising revenue earned, user/usage measures, or a combination of these. The determination of the amount of the rights holders' liability is complex and subject to a number of variables, including the revenue recognized, the type of content streamed and the country in which it is streamed, the product tier such content is streamed on, identification of the appropriate license holder, size of user base, ratio of Ad-Supported Users to Premium Subscribers, and any applicable advertising fees and discounts, among other variables. Some rights holders have allowed the use of their content on the platform while negotiations of the terms and conditions are ongoing. In such situations, royalties are calculated using estimated rates. In certain jurisdictions, rights holders have several years to claim royalties for musical compositions and therefore estimates of the royalties payable are made until payments are made. The Group has certain arrangements whereby royalty costs are paid in advance or are subject to minimum guaranteed amounts. An accrual is established when actual royalty costs to be incurred during a contractual period are expected to fall short of the minimum guaranteed amounts. For minimum guarantee arrangements, for which the Group cannot reliably predict the underlying expense, the Group will expense the minimum guarantee on a straight-line basis over the term of the arrangement. The Group also has certain royalty arrangements where the Group would have to make additional payments if the royalty rates were below those paid to other similar licensors (most favored nation clauses). For rights holders with this clause, a comparison is done of royalties incurred to date plus estimated royalties payable for the remainder of the period to estimates of the royalties payables to other appropriate rights holders, and the shortfall, if any, is recognized on a straight-line basis over the period of the applicable most favored nation clause. An accrual and expense is recognized when it is probable that the Group will make additional royalty payments under these terms. The expense related to these accruals is recognized in cost of revenue. Cost of revenue also includes credit card and payment processing fees for subscription revenue, customer service, certain employee compensation and benefits, cloud computing, streaming, facility, and equipment costs, as well as amounts incurred to produce content for the service. Direct costs incurred to acquire or develop podcasts are recognized as current assets. Cost of revenue includes the consumption of these assets over their useful economic life, which starts at the release of each episode. In most cases, consumption is on an accelerated basis.

(h) Research and development expenses

Research and development expenses are primarily comprised of costs incurred for development of products related to the Group's platform and service, as well as new advertising products and improvements to the Group's mobile app, desktop, and streaming services. The costs incurred include related employee compensation and benefits, facility costs, IT costs and consulting costs.

(i) Sales and marketing expenses

Sales and marketing expenses are primarily comprised of employee compensation and benefits, public relations, branding, consulting expenses, customer acquisition costs, advertising, live events and trade shows, amortization of trade name intangible assets, the cost of working with record labels and artists to promote the availability of new releases on the Group's platform, and the costs of providing free trials of the Premium Service. Expenses included in the costs of providing free trials are primarily derived from per user royalty fees determined in accordance with the rights holder agreements.

(j) General and administrative expenses

General and administrative expenses are comprised primarily of employee compensation and benefits for functions such as finance, accounting, analytics, legal, human resources, consulting fees, and other costs including facility and equipment costs, officers' liability insurance, director fees, and fair value adjustments on contingent consideration.

(k) Income tax

The tax expense for the period comprises current and deferred tax. Tax is recognized in the consolidated statement of operations except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

(i) Current tax

Current tax comprises the expected tax payable or receivable on the taxable income or loss for the year and any adjustment to tax payable or receivable in respect of previous years. It is measured using tax rates enacted or substantively enacted at the reporting date.

(ii) Deferred tax

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for:

- Temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;
- Temporary differences related to investments in subsidiaries, and associates to the extent that the Group is able to control the timing of the reversal of the temporary differences, and it is probable that they will not reverse in the foreseeable future; and
- Taxable temporary differences arising on the initial recognition of goodwill.

Deferred tax assets are recognized for unused tax losses, unused tax credits, and deductible temporary differences to the extent that it is probable that future taxable profits will be available, against which they can be used. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date. The measurement of deferred tax reflects the tax consequences that would follow from the manner in which the Group expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset only if certain criteria are met.

(iii) Uncertain tax positions

In determining the amount of current and deferred income tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes, interest or penalties may be due. This assessment relies on estimates and assumptions and may involve a series of judgments about future events. New information may become available that causes the Group to change its judgment regarding the adequacy of existing tax liabilities. Such changes to tax liabilities will impact tax expense in the period that such a determination is made.

(l) Leases

Policy applicable before January 1, 2019

At inception of an arrangement, the Group determines whether the arrangement is or contains a lease. The Group leases certain items of property and equipment. Leases in which substantially all the risks and rewards of ownership are not transferred to the Group as lessee are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the consolidated statement of operations on a straight-line basis over the period of the leases.

Leases of property and equipment where the Group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the lease's commencement at lower of the fair value of the leased property and the present value of the minimum lease payments. Each lease payment is allocated between the repayment of the liability and finance

charges. The corresponding lease obligations, net of finance charges, are included in borrowings. The interest element of the finance cost is charged to the consolidated statement of operations over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property and equipment acquired under finance leases is depreciated over the shorter of the useful life of the asset and the lease term.

Policy applicable from January 1, 2019

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether:

- The contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified;
- The Group has the right to obtain substantially all of the economic benefits from the use of the asset throughout the period of use; and
- The Group has the right to direct the use of the asset. The Group has this right when it has the decision-making rights that are most relevant to changing how and for what purpose the asset is used.

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices.

As a Lessee

The Group recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received prior to the commencement date. Any costs related to the removal and restoration of leasehold improvements, which meet the definition of property, plant and equipment under IAS 16 *Property Plant and Equipment* are assessed under IAS 37 and are not within the scope of IFRS 16.

The lease term is determined based on the non-cancellable period for which the Group has the right to use an underlying asset. The lease term is adjusted, if applicable, for periods covered by extension and termination options to the extent that the Group is reasonably certain to exercise them.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, which is considered the appropriate useful life of these assets. In addition, the right-of-use asset is reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability, to the extent necessary.

The lease liability is initially measured at the present value of the lease payments, net of lease incentives receivable, that are not paid at the commencement date, discounted using an incremental borrowing rate if the rate implicit in the lease arrangement is not readily determinable.

Lease payments included in the measurement of the lease liability comprise fixed payments, including in-substance fixed payments and variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date.

The lease liability is subsequently increased to reflect accretion of interest and reduced for lease payments made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, lease term, or if the Group changes its assessment of whether it will exercise an extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Group leases certain properties under non-cancellable lease agreements that relate to office space. The expected lease terms are between one and fifteen years.

The Group does not currently act in the capacity of a lessor.

Short-term leases and lease of low-value assets

The Group has elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets, including certain IT Equipment. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(m) Property and equipment

Property and equipment are stated at historical cost less accumulated depreciation and any accumulated impairment losses. Historical cost includes any expenditure that is directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by the Group.

The Group adds to the carrying amount of an item of property and equipment the cost of replacing parts of such an item if the replacement part is expected to provide incremental future benefits to the Group. All repairs and maintenance are charged to the consolidated statement of operations during the period in which they are incurred.

After assets are placed into service, depreciation is charged so as to allocate the cost of assets less their residual value over their estimated useful lives, using the straight-line method as follows:

- Property and equipment: 3 to 5 years
- Leasehold improvements: shorter of the lease term or useful life

The assets' residual values, useful lives, and depreciation methods are reviewed annually and adjusted prospectively if there is an indication of a significant change. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognized in the consolidated statement of operations when the asset is derecognized.

(n) Intangible assets

Acquired intangible assets other than goodwill comprise acquired developed technology, trade names, and patents. At initial recognition, intangible assets acquired in a business combination are recognized at their fair value as of the date of acquisition. Following initial recognition, intangible assets are carried at cost less accumulated amortization and impairment losses.

The Group recognizes internal development costs as intangible assets only when the following criteria are met: the technical feasibility of completing the intangible asset exists, there is an intent to complete and an ability to use or sell the intangible asset, the intangible asset will generate probable future economic benefits, there are adequate resources available to complete the development and to use or sell the intangible asset, and there is the ability to reliably measure the expenditure attributable to the intangible asset during its development.

Intangible assets with finite lives are typically amortized on a straight-line basis over their estimated useful lives, typically 3 to 5 years for technology and 3 to 8 years for trade names and trademarks and are assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset are reviewed at least annually. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization of intangible assets is recognized in the consolidated statement of operations in the expense category consistent with the function of the intangible assets.

(o) Goodwill

Goodwill is the excess of the consideration transferred over the net identifiable assets acquired and liabilities assumed. Goodwill is tested annually for impairment, or more regularly if certain indicators are present. For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the operating segments that are expected to benefit from the synergies of the combination and represent the lowest level at which the goodwill is monitored for internal management purposes. Goodwill is evaluated for impairment by comparing the recoverable amount of the Group's operating segments to the carrying amount of the operating segments to which the goodwill relates. If the recoverable amount is less than the carrying amount an impairment charge is determined.

The recoverable amount of the operating segments is based on fair value less costs of disposal. The Group determines the fair value of the operating segments using a combination of a discounted cash flow analysis and a market-based approach.

The Group believes reasonable estimates and judgments have been used in assessing the recoverable amounts.

(p) Impairment of non-financial assets

Assets that are subject to depreciation or amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. An impairment loss is recognized in the consolidated statement of operations consistent with the function of the assets, for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are largely independent cash inflows. Prior impairments of non-financial assets (other than goodwill) are reviewed for possible reversal each reporting period.

(q) Financial instruments

(i) Financial assets

Initial recognition and measurement

The Group's financial assets are comprised of cash and cash equivalents, short term investments, trade and other receivables, derivative assets, long term investments, restricted cash, and other non-current assets. All financial assets are recognized initially at fair value plus transaction costs that are attributable to the acquisition of the financial asset. Purchases and sales of financial assets are recognized on the settlement date; the date that the Group receives or delivers the asset. Receivables are non-derivative financial assets, other than short term and long term investments described below, with fixed or determinable payments that are not quoted in an active market. They are included in current assets except for those with maturities greater than 12 months after the reporting period.

For more information on receivables, refer to Note 16.

Short term investments are primarily comprised of debt instruments carried at fair value through other comprehensive income. The securities in this category are those that are intended to be held for an indefinite period of time and that may be sold in response to needs for liquidity or in response to changes in the market conditions (therefore not recognized at amortized cost). These meet both the hold to collect and sell business model and solely payments of principal and interest contractual cash flows tests under IFRS 9 *Financial Instruments*. These are classified as current assets.

Long term investments are comprised of equity instruments carried at fair value through other comprehensive income based on the irrevocable election made at initial recognition under IFRS 9 *Financial Instruments*. The securities within this category are intended to be held for an indefinite period of time and for strategic investment purposes. These are neither held for trading nor contingent consideration recognized by an acquirer in a business combination. These are classified as non-current assets. The Group's primary long term investment is its equity investment in Tencent Music Entertainment Group ("TME").

Subsequent measurement

After initial measurement, short term investments are measured at fair value with unrealized gains or losses recognized in other comprehensive income and credited in other reserves within equity until the investment is derecognized, at which time, the cumulative gain or loss is recognized in finance income/costs, or the investment is determined to be impaired, when the cumulative loss is reclassified from the short term investments reserve to the consolidated statement of operations in finance costs. Interest earned whilst holding the short term investments is reported as interest income using the effective interest method. Interest income and foreign exchange revaluation are recognized in the statement of operations in the same manner as all other financial assets.

After initial measurement, long term investments are measured at fair value with unrealized gains or losses, including any related foreign exchange impacts, recognized in other comprehensive income and credited in other reserves within equity without recognizing fair value changes to profit and loss upon derecognition. Dividends received are recognized in the consolidated statement of operations in finance income.

Derecognition

Financial assets are derecognized when the rights to receive cash flows from the asset have expired.

Impairment of financial assets

The Group assesses at each reporting date whether there is any evidence that a financial asset or a group of financial assets is impaired, primarily its trade receivables and short term investments. The Group assesses impairment for its financial assets, excluding trade receivables, using the general expected credit losses model. Under this model, the Group calculates the allowance for credit losses by considering on a discounted basis, the cash shortfalls it would incur in various default scenarios for prescribed future periods and multiplying the shortfalls by the probability of each scenario occurring. The allowance on the financial asset is the sum of these probability-weighted outcomes.

For the Group's short term investments, the Group applies the low credit risk simplification as it does not believe there to be any credit risk related to these assets given the credit quality ratings required by the Group's investment policy. At every reporting date, the Group evaluates whether a particular debt instrument is considered to have low credit risk using all supportable information.

The Group's long term investments are not assessed for impairment due to the irrevocable election made under IFRS 9 *Financial Instruments* as stated above.

The Group uses the simplified approach for measuring impairment for its trade receivables as these financial assets do not have a significant financing component as defined under IFRS 15, *Revenue from Contracts with Customers*. Therefore, the Group does not determine if the credit risk for these instruments has increased significantly since initial recognition. Instead, a loss allowance is recognized based on lifetime expected credit losses at each reporting date. Impairment losses and subsequent reversals are recognized in profit or loss and is the amount required to adjust the loss allowance at the reporting date to the amount that is required to be recognized based on the aforementioned policy. The Group has established a provision matrix that is based on its historical credit loss experiences, adjusted for forward-looking factors specific to the debtors and the economic environment. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognized in the consolidated statement of operations.

(ii) Financial liabilities

Initial recognition and measurement

The Group's financial liabilities are comprised of trade and other payables, lease liabilities, derivative liabilities (warrants and instruments designated for hedging), and other liabilities, including contingent consideration. Prior to April 3, 2018, financial liabilities also included Convertible Notes and contingent options. All financial liabilities except lease liabilities are recognized initially at fair value and, in the case of Convertible Notes, net of directly attributable transaction costs.

The Group accounted for the Convertible Notes in accordance with IAS 39, *Financial Instruments: Recognition and Measurement*, 'fair value option' and IFRS 9 *Financial Instruments* as fair value through profit and loss. Under these approaches, the Convertible Notes were accounted for in their entirety at fair value, with any change in fair value after initial measurement being recorded in the consolidated statement of operations and the transaction costs were effectively immediately expensed.

The Group accounts for the warrants as a financial liability measured at fair value through profit or loss. In accordance with IAS 32, *Financial Instruments: Presentation*, the Group determined that the warrants were precluded from equity classification, because while they contain no contractual obligation to deliver cash or other financial instruments to the holders other than the Company's own shares, the exercise prices of the warrants are in US\$ and not the Company's functional currency and the Group allows for net settlement, which enables settlement for a variable number of the Company's ordinary shares. Therefore, the warrants do not meet the requirements that they be settled by the issuer exchanging a fixed amount of cash or another financial asset for a fixed number of its own equity instruments.

The group accounts for contingent consideration as a financial liability measured at fair value through profit or loss. The fair value of the contingent consideration is presented as a component of accrued expenses and other liabilities on the consolidated statement of financial position. Changes to the fair value of the contingent consideration are recorded as operating expenses within general and administrative expenses.

Subsequent measurements

Other financial liabilities

After initial recognition, payables are subsequently measured at amortized cost using the effective interest method. The effective interest method amortization is included in finance costs in the consolidated statement of operations. Gains and losses are recognized in the consolidated statement of operations when the liabilities are derecognized.

Payables are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

Financial liabilities at fair value through profit or loss

After initial recognition, financial liabilities at fair value through the profit or loss are subsequently re-measured at fair value at the end of each reporting period with changes in fair value recognized in finance income or finance costs in the consolidated statement of operations.

Derecognition

Financial liabilities are derecognized when the obligation under the liability is discharged, cancelled, or expires.

(iii) Fair value measurements

For financial assets and liabilities measured at fair value on a recurring basis, fair value is the price the Group would receive to sell an asset or pay to transfer a liability in an orderly transaction with a market participant at the measurement date. In the absence of active markets for identical assets or liabilities, such measurements involve developing assumptions based on market observable data and, in the absence of such data, internal information that is consistent with what market participants would use in a hypothetical transaction that occurs at the measurement date. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Group's market assumptions. All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy, are described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities;
- Level 2: other techniques for which inputs are based on quoted prices for identical or similar instruments in markets that are not active, quoted prices for similar instruments in active markets, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the asset or liability;
- Level 3: techniques which use inputs that have a significant effect on the recognized fair value that require the Group to use its own assumptions about market participant assumptions.

The Group maintains policies and procedures to determine the fair value of financial assets and liabilities using what it considers to be the most relevant and reliable market participant data available. It is the Group's policy to maximize the use of observable inputs in the measurement of its Level 3 fair value measurements. To the extent observable inputs are not available, the Group utilizes unobservable inputs based upon the assumptions market participants would use in valuing the asset or liability. In determining the fair value of financial assets and liabilities employing Level 3 inputs, the Group considers such factors as the current interest rate, equity market, currency and credit environments, expected future cash flows, the probability of certain future events occurring, and other published data. The Group performs a variety of procedures to assess the reasonableness of its fair value determinations including the use of third parties.

(iv) Foreign exchange forward contracts

The Group designates certain foreign exchange forward contracts as cash flow hedges when all the requirements in IFRS 9 *Financial Instruments* are met. The Group recognizes the activities from these cash flow hedges as either assets or liabilities on the statement of financial position and are measured at fair value at each reporting period. Assets and liabilities are offset and the net amount is presented in the statement of financial position when the Group has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The asset and liability positions of the foreign exchange forward contracts are included in other current assets and derivative liabilities on the consolidated statement of financial position, respectively. The Group reflects the gain or loss on the effective portion of a cash flow hedge as a component of equity and subsequently reclassifies cumulative gains and losses to revenues or cost of revenues, depending on the risk hedged, when the

hedged transactions are settled. If the hedged transactions become probable of not occurring, the corresponding amounts in other reserves are immediately reclassified to finance income or costs. Foreign exchange forward contracts that do not meet the requirements in IFRS 9 *Financial Instruments* to be designated as a cash flow hedge, are classified as derivative instruments not designated for hedging. The Group measures these instruments at fair value with changes in fair value recognized in finance income or costs. Refer to Note 23.

(r) Cash and cash equivalents and restricted cash

Cash and cash equivalents comprise cash on deposit at banks and on hand and highly liquid investments with maturities of three months or less at the date of purchase that are not subject to restrictions. Cash deposits that have restrictions governing their use are classified as restricted cash, current or non-current, based on the remaining length of the restriction.

(s) Short term investments

The Group invests in a variety of instruments, such as commercial paper, corporate debt securities, collateralized reverse purchase agreements, and government and agency debt securities. Part of these investments are held in short duration fixed income portfolios. The average duration of these instruments is less than two years. All investments are governed by an investment policy and are held in highly-rated counterparties. Separate credit limits are assigned to each counterparty in order to minimize risk concentration.

These investments are classified as debt instruments and are carried at fair value with the unrealized gains and losses reported as a component of equity. Management determines the appropriate classification of investments at the time of purchase and re-evaluates whether the investments pass both the hold to collect and sell and solely payments of principal and interest tests. The short term investments with maturities greater than twelve months are classified as short term when they are intended for use in current operations. The cost basis for investments sold is based upon the specific identification method.

(t) Long term investments

Long term investments consist of non-controlling equity interests in public and private companies where the Group does not exercise significant influence. The investments are classified as equity instruments carried at fair value through other comprehensive income. Refer to Note 23.

(u) Share capital

Ordinary shares are classified as equity.

Equity instruments are initially measured at the fair value of the cash or other resources received or receivable, net of the direct costs of issuing the equity instruments.

In 2018, the Group began repurchasing its ordinary shares. The cost of treasury shares repurchased is shown as a reduction to equity, within treasury shares, on the statement of financial position. When treasury shares are sold, reissued, or retired, the amount received is reflected as an increase to equity based on a weighted average cost, with any surplus or deficit recorded within Other paid in capital.

(v) Share-based payments

Employees of the Group receive remuneration in the form of share-based payment transactions, whereby employees render services in consideration for equity instruments.

The cost of equity-settled transactions with employees is determined by the fair value at the date of grant using an appropriate valuation model. The cost is recognized in the consolidated statement of operations, together with a corresponding credit to other reserves in equity, over the period in which the performance and service conditions are fulfilled.

The cumulative expense recognized for equity-settled transactions with employees at each reporting date until the vesting date reflects the Group's best estimate of the number of equity instruments that will ultimately vest. The expense for a period represents the movement in cumulative expense recognized at the beginning and end of that period, and is recognized in employee share-based payments. When the terms of an equity-settled transaction award are modified, the minimum expense recognized is the expense as if the terms had not been modified, if the original terms of the award are met. An additional expense is recognized for modifications that

increase the total fair value of the share-based payment transaction or are otherwise beneficial to the grantee as measured at the date of modification. There were no material modifications to any share-based payment transactions during 2019, 2018, and 2017.

Social costs are payroll taxes associated with employee salaries and benefits, including share-based compensation. Social costs in connection with granted options and restricted stock units are accrued over the vesting period based on the intrinsic value of the award that has been earned at the end of each reporting period. The amount of the liability reflects the amortization of the award and the impact of expected forfeitures. The social cost rate at which the accrual is made generally follows the tax domicile within which other compensation charges for a grantee are recognized.

The assumptions and models used for estimating fair value for share-based payment transactions are disclosed in Note 18.

In many jurisdictions, tax authorities levy taxes on share-based payment transactions with employees that give rise to a personal tax liability for the employee. In some cases, the Group is required to withhold the tax due and to settle it with the tax authority on behalf of the employees. To fulfil this obligation, the terms of the Group's restricted stock unit arrangements permit the Group to withhold the number of shares that are equal to the monetary value of the employee's tax obligation from the total number of shares that otherwise would have been issued to the employee upon vesting of the restricted stock unit. The monetary value of the employee's tax obligation is recorded as a deduction from Other reserves for the shares withheld.

(w) Employee benefits

The Group provides defined contribution plans to its employees. The Group pays contributions to publicly and privately administered pension insurance plans on a mandatory or contractual basis. The Group has no further payment obligations once the contributions have been paid. Contributions to defined contribution plans are expensed when employees provide services. The Group's post-employment schemes do not include any defined benefit plans.

(x) Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

New and amended standards and interpretations adopted by the Group

On January 1, 2019, the Group adopted IFRS 16, *Leases*, using the modified retrospective approach and recognized the cumulative effect of initially applying the standard as an adjustment to accumulated deficit. The group elected the available practical expedients on adoption. The most significant change is related to the recognition of right-of-use assets and lease liabilities on the consolidated statement of financial position for real estate operating leases, along with the net impact on transition recorded to accumulated deficit, and deferred tax assets, potentially unrecognized, resulting from the aforementioned changes. The Group's statement of operations after adoption reflects additional depreciation expense due to the right-of use assets and an increase in finance costs for effective interest expense on its lease liabilities which are partially offset by a reduction in rental expenses. Refer to above and Note 12 for further information.

On January 1, 2019, the Group adopted International Financial Reporting Interpretations Committee ("IFRIC") Interpretation 23, *Uncertainty over Income Tax Treatments*. The Group has concluded that its current accounting policies for estimating uncertain tax positions is in line with IFRIC Interpretation 23. The impact on adoption did not have any material impact on the consolidated financial statements.

New standards and interpretations issued not yet effective

There are no IFRS or IFRIC interpretations that are not effective that are expected to have a material impact.

3. Critical accounting estimates and judgments

The preparation of the consolidated financial statements requires management to make judgments, estimates, and assumptions that affect the reported amounts of revenues, expenses, assets, liabilities, and equity in the consolidated financial statements and the accompanying disclosures. Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events.

Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

The areas where assumptions and estimates are significant to the consolidated financial statements are:

- (i) The Group measures the cost of equity-settled transactions with employees and non-employees by reference to the fair value of the equity instruments at the date at which they are granted. Prior to April 3, 2018, the fair value was estimated using a model, which required the determination of the appropriate inputs, specifically ordinary share price. Subsequent to the Group's direct listing, ordinary share price is no longer based on significant assumptions and estimates. The assumptions and models used for estimating the fair value of share-based payment transactions are disclosed in Note 18.
- (ii) Prior to April 3, 2018, the fair value of the Group's Convertible Notes, warrants, contingent options, and long term investments were estimated using valuation techniques using inputs based on management's judgment and conditions that existed at each reporting date. On April 3, 2018, the Group derecognized the Convertible Notes and contingent options. Subsequent to December 12, 2018, the fair value of the Group's investment in TME is based on inputs within Level 1 of the fair value hierarchy as disclosed in Note 2. The assumptions and models used for estimating the fair value of the instruments are disclosed in Note 23.
- (iii) The Group has fiscal loss carry-forwards. At period end, the Group investigates the possibility of recognizing deferred tax assets with regard to the loss carry-forwards. Deferred tax assets related to loss carry-forwards are recognized only in those cases where it is probable and there is convincing evidence that the Group will generate future taxable income to which the loss carry-forward can be utilized. See Note 10.
- (iv) In accordance with the accounting policy described in Note 2, the Group annually performs an impairment test regarding goodwill. The assumptions used for estimating fair value and assessing available headroom based on conditions that existed at the testing date are disclosed in Note 14.
- (v) The Group's agreements and arrangements with rights holders for the content used on its platform are complex. Some rights holders have allowed the use of their content on the platform while negotiations of the terms and conditions are ongoing. In certain jurisdictions, rights holders have several years to claim royalties for musical composition and therefore estimates of the royalty accruals are based on available information and historical trends. The determination of royalty accruals involves significant judgements, assumptions, and estimates of the amounts to be paid. See Note 21.
- (vi) Management makes significant assumptions and estimates when determining the amounts to record for provision for legal contingencies. See Note 22.
- (vii) In business combinations, the Group allocates the fair value of purchase consideration to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identified assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates, assumptions, and judgments, especially with respect to intangible assets and contingent consideration. See Note 5.
- (viii) As most of the Group's lease agreements do not provide an implicit rate of return, the Group uses its incremental borrowing rate based on the information available at the lease commencement date to determine the present value of lease payments. For the Group's lease agreements that existed prior to the adoption date, the Group determined its incremental borrowing rate as of January 1, 2019. The Group's incremental borrowing rate is determined based on estimates and judgments, including the credit rating of the Group's leasing entities and a credit spread. See Note 2 and 12.

4. Revenue recognition

Revenue from contracts with customers

(i) Disaggregated revenue

The Group discloses revenue by reportable segment and geographic area in Note 6.

(ii) Performance obligations

The Group discloses its policies for how it identifies, satisfies, and recognizes its performance obligations associated with its contracts with customers in Note 2.

(iii) Contract liabilities

The Group's contract liabilities from contracts with customers consist only of deferred revenue. Deferred revenue is mainly comprised of subscription fees collected for services not yet performed and therefore the revenue has not been recognized. Revenue is recognized over time as the services are performed. As of December 31, 2019 and 2018, the Group had deferred revenue of €319 million and €258 million, respectively. The increase in deferred revenue in 2019 is a result of an increase in the number of Premium Subscribers. This balance will be recognized as revenue as the services are performed, which is generally expected to occur over a period up to a year.

Revenue recognized that was included in the contract liability balance at the beginning of the years ended December 31, 2019, 2018, and 2017 is €248 million, €210 million, and €149 million respectively.

5. Business combinations

The following sections describe the Group's material acquisitions during the years ended December 31, 2019 and 2018.

Anchor FM Inc.

On February 14, 2019, the Group acquired Anchor FM Inc. ("Anchor"), a software company that enables users to create and distribute their own podcasts. The acquisition allows the Group to leverage Anchor's creator-focused platform to accelerate the Group's path to becoming the world's leading audio platform.

The total purchase consideration was €136 million, which consisted of €125 million in cash and €11 million related to the fair value of partially vested share-based payment awards replaced. The replacement of Anchor's share-based payment awards with share-based payments awards of the Company has been measured in accordance with IFRS 2, *Share-based Payment*, at the acquisition date. The acquisition was accounted for under the acquisition method. Of the total purchase consideration, €126 million has been recorded to goodwill, €9 million to acquired intangible assets, €2 million to deferred tax liabilities, €4 million to cash and cash equivalents, and €1 million to other liabilities. The Group incurred €1 million in acquisition related costs, which were recognized as general and administrative expenses.

The goodwill represents the future economic benefits expected to arise from other intangible assets acquired that do not qualify for separate recognition, including expected future synergies and technical expertise of the acquired workforce. None of the goodwill recognized is expected to be deductible for tax purposes. The goodwill was included in the Ad-Supported segment.

The intangible assets acquired primarily relate to existing technology and have a useful life of 3 years. The Group valued the existing technology using the replacement cost method under the cost approach.

Included in the arrangement are €20 million of equity instruments granted to certain employees that have vesting conditions contingent on continued employment and are accounted for as equity-settled share-based payment transactions. Of the value of these instruments, €11 million is included in purchase consideration as discussed above, with the remaining amount of up to €9 million to be recorded as post-combination expense over service periods of up to four years, if not forfeited by the employees.

Gimlet Media Inc.

On February 15, 2019, the Group acquired Gimlet Media Inc. ("Gimlet"), an independent producer of podcast content. The acquisition allows the Group to leverage Gimlet's in-depth knowledge of original content production and podcast monetization.

The total purchase consideration was €172 million, which consisted of €170 million in cash and €2 million related to the fair value of partially vested share-based payment awards replaced. The replacement of Gimlet's share-based payment awards with share-based payments awards of the Company has been measured in accordance with IFRS 2, *Share-based Payment*, at the acquisition date.

The acquisition was accounted for under the acquisition method. Of the total purchase consideration, €148 million has been recorded to goodwill, €15 million to acquired intangible assets, €5 million to deferred tax liabilities, €3 million to cash and cash equivalents, €3 million to content assets and €8 million to other tangible net assets. The Group incurred €3 million in acquisition related costs, which were recognized as general and administrative expenses.

The goodwill represents the future economic benefits expected to arise from other intangible assets acquired that do not qualify for separate recognition, including an increase in content development capabilities, an experienced workforce, and expected future synergies. None of the goodwill recognized is expected to be deductible for tax purposes. The goodwill was included in the Ad-Supported segment.

The intangible assets and the content assets were valued by the Group using the relief from royalty method and the discounted cash flow method, respectively, both under the income approach. The relief from royalty method is based on the application of a royalty rate to forecasted revenue under the trade names. The assets have useful lives ranging from 2 to 8 years.

Included in the arrangement are payments that are contingent on continued employment. The payments are recognized as remuneration for post-combination services and are automatically forfeited if employment terminates. A total of up to €40 million of post-combination cash pay-outs will be recorded as compensation expense over a service period of up to four years.

Cutler Media, LLC

On April 1, 2019, the Group acquired Cutler Media, LLC (“Parcast”), a premier storytelling podcast studio. The acquisition allows the Group to bolster its content portfolio and utilize Parcast’s writers, producers, and researchers in the production of high-quality content.

The total purchase consideration was €49 million, which consisted of €36 million in cash and €13 million related to the estimated fair value of contingent consideration. The maximum potential contingent consideration is €43 million over the next three years, which is dependent on certain user engagement targets. The fair value of the contingent consideration is presented as a component of accrued expenses and other liabilities on the consolidated statement of financial position. The contingent consideration was valued by the Group using a simulation of user engagement outcomes under the income approach. Changes to the fair value of the contingent consideration will be recorded as operating expenses within general and administrative expenses.

The acquisition was accounted for under the acquisition method. Of the total purchase consideration, €46 million has been recorded to goodwill, €2 million to acquired intangible assets, and €1 million to content assets. The Group incurred €1 million in acquisition related costs, which were recognized as general and administrative expenses.

The goodwill represents the future economic benefits expected to arise from other intangible assets acquired that do not qualify for separate recognition, including an increase in content development capabilities, an experienced workforce, and expected future synergies. The goodwill recognized is expected to be deductible for tax purposes. The goodwill was included in the Ad-Supported segment.

The intangibles assets and the content assets were valued by the Group using the relief from royalty method and the discounted cash flow method, respectively, both under the income approach. The relief from royalty method is based on the application of a royalty rate to forecasted revenue under the trade names. The assets have useful lives ranging from 2 to 6 years.

Included in the arrangement are payments that are contingent on continued employment. The payments are recognized as remuneration for post-combination services and are automatically forfeited if employment terminates. A total of up to €10 million of post-combination cash pay-outs will be recorded as compensation expense over a service period of up to four years.

Revenues and operating losses of acquired businesses for the year ended December 31, 2019 were not significant, individually or in the aggregate, to the Group’s consolidated statement of operations.

6. Segment information

The Group has two reportable segments: Premium and Ad-Supported. The Premium Service is a paid service in which customers can listen on-demand and offline. Revenue is generated through subscription fees. The Ad-Supported Service is free to the user. Revenue is generated primarily through the sale of advertising. Royalty costs are primarily recorded in each segment based on specific rates for each segment agreed to with rights holders. The remaining royalties that are not specifically associated to either of the segments are allocated based on user activity or the revenue recognized in each segment. The operations of businesses acquired during the year ended December 31, 2019 are included in the Ad-Supported segment. No operating segments have been aggregated to form the reportable segments.

Key financial performance measures of the segments including revenue, cost of revenue, and gross profit are as follows:

	2019	2018 (in € millions)	2017
Premium			
Revenue	6,086	4,717	3,674
Cost of revenue	4,465	3,461	2,868
Gross profit	1,621	1,256	806
Ad-Supported			
Revenue	678	542	416
Cost of revenue	577	445	373
Gross (loss)/profit	101	97	43
Consolidated			
Revenue	6,764	5,259	4,090
Cost of revenue	5,042	3,906	3,241
Gross profit	1,722	1,353	849

Reconciliation of gross profit

Operating expenses, finance income, and finance costs are not allocated to individual segments as these are managed on an overall group basis. The reconciliation between reportable segment gross profit to the Group's loss before tax is as follows:

	2019	2018 (in € millions)	2017
Segment gross profit	1,722	1,353	849
Research and development	(615)	(493)	(396)
Sales and marketing	(826)	(620)	(567)
General and administrative	(354)	(283)	(264)
Finance income	275	455	118
Finance costs	(333)	(584)	(974)
Share in (losses)/earnings of associate	—	(1)	1
Loss before tax	(131)	(173)	(1,233)

Revenue by country

	2019	2018 (in € millions)	2017
United States	2,542	1,973	1,577
United Kingdom	727	576	444
Luxembourg	4	3	3
Other countries	3,491	2,707	2,066
	6,764	5,259	4,090

Premium revenue is attributed to a country based on where the membership originates. Ad-Supported revenue is attributed to a country based on where the advertising campaign is viewed. There are no countries that individually make up greater than 10% of total revenue included in “Other countries.”

Non-current assets by country

Non-current assets for this purpose consists of property and equipment and lease right-of-use assets.

	2019	2018 (in € millions)	2017
Sweden	154	29	32
United States	525	142	28
United Kingdom	79	19	6
Other countries	22	7	7
	780	197	73

As of December 31, 2019, 2018, and 2017, the Group held no property and equipment in Luxembourg.

7. Personnel expenses

	2019	2018 (in € millions, except employee data)	2017
Wages and salaries	541	409	348
Social costs	111	90	136
Contributions to retirement plans	26	20	17
Share-based payments	122	88	65
Other employee benefits	88	60	48
	888	667	614
Average full-time employees	4,405	3,651	2,960

8. Auditor remuneration

	2019	2018 (in € millions)	2017
Auditor fees	5	4	5

9. Finance income and costs

	2019	2018 (in € millions)	2017
Finance income			
Fair value movements on derivative liabilities (Note 23)	182	376	97
Interest income	31	25	19
Other financial income	1	11	2
Foreign exchange gains	61	43	—
Total	275	455	118
Finance costs			
Fair value movements on derivative liabilities (Note 23)	(235)	(360)	(303)
Fair value movements on Convertible Notes (Note 23)	—	(201)	(524)
Interest expense on lease liabilities	(38)	—	—
Interest, bank fees and other costs	(5)	(6)	(4)
Foreign exchange losses	(55)	(17)	(143)
Total	(333)	(584)	(974)

10. Income tax

	2019	2018 (in € millions)	2017
Current tax expense			
Current year	45	41	6
Changes in estimates in respect to prior year	(1)	—	1
	<u>44</u>	<u>41</u>	<u>7</u>
Deferred tax expense/(benefit)			
Temporary differences	27	(123)	(5)
Change in recognition of deferred tax	(17)	(14)	—
Change in tax rates	1	1	—
	<u>11</u>	<u>(136)</u>	<u>(5)</u>
Income tax expense/(benefit)	<u>55</u>	<u>(95)</u>	<u>2</u>

For the years ended December 31, 2019, 2018, and 2017, the Group recorded an income tax (benefit)/expense of €(31) million, €147 million, and €0 million, respectively, in other comprehensive (loss)/income related to components of other comprehensive (loss)/income.

The Group believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience.

In 2019, the Group did not recognize current income tax expense for uncertain tax positions and have cumulatively recorded liabilities of €1 million for uncertain tax positions at December 31, 2019, of which none is reasonably expected to be resolved within twelve months.

A reconciliation between the reported tax expense for the year, and the theoretical tax expense that would arise when applying the statutory tax rate in Luxembourg of 24.94%, 26.01%, and 27.08%, and on the consolidated loss before taxes for the years ended December 31, 2019, 2018, and 2017, respectively, is shown in the table below:

	2019	2018 (in € millions)	2017
Loss before tax	(131)	(173)	(1,233)
Tax using the Luxembourg tax rate	(33)	(45)	(334)
Effect of tax rates in foreign jurisdictions	2	(11)	(10)
Permanent differences	58	(7)	15
Change in unrecognized deferred taxes	29	(43)	329
Deferred tax on foreign exchange differences	1	8	—
Other	(2)	3	2
Income tax expense/(benefit)	<u>55</u>	<u>(95)</u>	<u>2</u>

In 2019 and 2018, the Group recognized deferred tax expense of €0 million and €8 million, respectively, as a result of foreign exchange differences on its investment in TME. The Group will be subject to deferred tax in future periods as a result of foreign exchange movements between USD, EUR, and SEK, primarily related to its investment in TME.

The major components of deferred tax assets and liabilities are comprised of the following:

	2019	2018
	(in € millions)	
Intangible assets	(42)	(1)
Share-based compensation	14	6
Tax losses carried forward	78	147
Property and equipment	79	5
Unrealized gains	(126)	(154)
Other	4	3
Net tax	<u>7</u>	<u>6</u>

A reconciliation of net deferred tax is shown in the table below:

	2019	2018 (in € millions)	2017
At January 1	6	6	3
Movement recognized in consolidated statement of operations	(11)	136	5
Movement recognized in consolidated statement of changes in equity and other comprehensive income	18	(136)	2
Movement due to acquisition	(6)	—	(4)
At December 31	7	6	6

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Reconciliation to consolidated statement of financial position	2019 (in € millions)	2018
Deferred tax assets	9	8
Deferred tax liabilities	2	2

Deferred tax assets have not been recognized in respect of the following items, because it is not probable that future taxable profit will be available against which the Group can use the benefits.

	2019 (in € millions)	2018
Intangible assets	77	72
Share-based compensation	58	34
Tax losses carried forward	192	148
Unrealized losses	3	2
Other	49	20
	379	276

At December 31, 2019, no deferred tax liability had been recognized on investments in subsidiaries. The Company has concluded it has the ability and intention to control the timing of any distribution from its subsidiaries and will only do so in a tax advantageous manner. It is not practicable to calculate the unrecognized deferred tax liability on investments in subsidiaries.

Tax loss carry-forwards as at December 31, 2019 were expected to expire as follows:

Expected expiry	2020-2029	2030 and onwards	Unlimited	Total
	(in € millions)			
Tax loss carry-forwards	—	509	996	1,505
Research and development credit carryforward	—	16	—	16
Foreign tax credits	4	—	—	4

The Group has significant net operating loss carry-forwards in the United States and Sweden. In certain jurisdictions, if the Group is unable to earn sufficient income or profits to utilize such carry-forwards before they expire, they will no longer be available to offset future income or profits.

In Sweden, utilization of these net operating loss carry-forwards may be subject to a substantial annual limitation if there is an ownership change within the meaning of Chapter 40, paragraphs 10-14, of the Swedish Income Tax Act (the “Swedish Income Tax Act”). In general, an ownership change, as defined by the Swedish Income Tax Act results from a transaction or series of transactions over a five-year period resulting in an ownership change of more than 50% of the outstanding stock of a company by certain categories or individuals, businesses or organizations.

In addition, in the United States, utilization of these net operating loss carry-forwards may be subject to a substantial annual limitation if there is an ownership change within the meaning of Section 382 of the Internal Revenue Code (“Section 382”). In general, an ownership change, as defined by Section 382, results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50% of the outstanding stock of a company by certain stockholders or public groups. Since the Group formation, the Group has raised capital through the issuance of capital stock on several occasions, and the Group may continue to do so, which, combined with current or future shareholders’ disposition of ordinary shares, may have resulted in such an ownership change. Such an ownership change may limit the amount of net operating loss carry-forwards that can be utilized to offset future taxable income.

The Group’s most significant tax jurisdictions are Sweden and the U.S. (both at the federal level and in various state jurisdictions). Because of its tax loss and tax credit carry-forwards, substantially all of the Group’s tax years after 2012 remain open to federal, state, and foreign tax examination. Certain of the Group’s subsidiaries are currently under examination by the Swedish, U.S. and other foreign tax authorities for tax years from 2013-2017. These examinations may lead to adjustments to the Group’s taxes.

The Group has initiated and are in negotiations of an Advanced Pricing Agreement (“APA”) between Sweden and the United States governments for the tax years 2014 through 2020 covering various transfer pricing matters. These transfer pricing matters may be significant to the consolidated financial statements.

11. Loss per share

Basic loss per share is computed using the weighted-average number of outstanding ordinary shares during the period. Diluted loss per share is computed using the treasury stock method to the extent that the effect is dilutive by using the weighted-average number of outstanding ordinary shares and potential ordinary shares during the period. The Group’s potential ordinary shares consist of incremental shares issuable upon the assumed exercise of stock options and warrants, and the incremental shares issuable upon the assumed vesting of unvested restricted stock units, restricted stock awards, and other contingently issuable shares, excluding all anti-dilutive ordinary shares outstanding during the period. The Group used the if-converted method to calculate the dilutive impact of the warrants and adjusted the numerator for changes in profit or loss. The computation of loss per share for the respective periods is as follows:

	2019	2018	2017
	(in € millions, except share and per share data)		
Basic loss per share			
Net loss attributable to owners of the parent	(186)	(78)	(1,235)
<i>Shares used in computation:</i>			
Weighted-average ordinary shares outstanding	180,960,579	177,154,405	151,668,769
Basic net loss per share attributable to owners of the parent	<u>(1.03)</u>	<u>(0.44)</u>	<u>(8.14)</u>
Diluted loss per share			
Net loss attributable to owners of the parent	(186)	(78)	(1,235)
Fair value adjustments on warrants	—	(14)	—
Net loss used in the computation of diluted loss per share	(186)	(92)	(1,235)
<i>Shares used in computation:</i>			
Weighted-average ordinary shares outstanding	180,960,579	177,154,405	151,668,769
Warrants	—	4,055,887	—
Diluted weighted average ordinary shares	<u>180,960,579</u>	<u>181,210,292</u>	<u>151,668,769</u>
Diluted net loss per share attributable to owners of the parent	<u>(1.03)</u>	<u>(0.51)</u>	<u>(8.14)</u>

Potential dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	2019	2018	2017
Employee options	12,153,772	12,243,526	14,646,720
Restricted stock units	638,350	100,383	195,937
Restricted stock awards	41,280	61,880	61,880
Other contingently issuable shares	162,320	—	—
Warrants	2,400,000	—	6,720,000

12. Leases

On January 1, 2019, the Group adopted IFRS 16, and all related amendments, using the modified retrospective transition method, under which the cumulative effect of initial application is recognized in accumulated deficit at January 1, 2019. The new standard requires the recognition of right-of-use assets and lease liabilities on the Group's balance sheet for operating leases, along with the net impact on transition recorded to accumulated deficit. The Group is required to separately recognize the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

The Group's statement of operations for 2019 reflects additional depreciation expense due to the right-of use assets and an increase in finance costs for effective interest expense on its lease liabilities, partially offset by a reduction in rental expenses.

There is no impact to the overall changes in cash flows. However, operating cash flows are positively impacted, while financing cash flows are negatively impacted due primarily to the classification of principal payments on lease liabilities.

The comparative information for 2018 has not been restated and continues to be reported under IAS 17 and related interpretations. The primary change in accounting policies as a result of the application of IFRS 16 is explained above in Note 2. Such a change is made in accordance with the transitional provisions of IFRS 16.

Definition of a lease

Previously, the Group determined at contract inception whether an arrangement is or contains a lease under IAS 17 and IFRIC 4. Under IFRS 16, the Group assesses whether a contract is or contains a lease based on the definition of a lease, as explained in Note 2.

The Group elected to use the transition practical expedient allowing the standard to be applied only to contracts that were previously identified as leases applying IAS 17 and IFRIC 4 at the date of initial application. Therefore, the definition of a lease under IFRS 16 was applied only to contracts entered into or changed on or after January 1, 2019.

As a lessee, the Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and rewards incidental to ownership of the underlying asset to the Group. Under IFRS 16, the Group recognizes right-of-use assets and lease liabilities for most leases previously classified as operating under IAS 17.

Leases classified as operating leases under IAS 17

At transition, lease liabilities were measured at the present value of the remaining lease payments, net of lease incentives receivable, that are not paid at the commencement date, discounted at the lessee's incremental borrowing rate as at January 1, 2019. Right-of-use assets are measured at their carrying amount as if IFRS 16 had been applied since the commencement date and discounted using the lessee's incremental borrowing rate at the date of initial application.

The Group used the following practical expedients when applying IFRS 16 to leases previously classified as operating leases under IAS 17.

- Applied the exemption not to recognize right-of-use assets and liabilities for leases with less than 12 months of lease term.
- Excluded initial direct costs from measuring the right-of-use asset at the date of initial application.
- Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

Below is a reconciliation of lease liabilities related to lease commitments as of the date recognized due to the modified retrospective application of IFRS 16:

	<u>January 1, 2019</u> (in € millions)
Total lease commitments as of December 31, 2018	833
Impact of discounting remaining lease payments	(285)
Recognition exemption for short-term leases	(7)
Total lease liabilities included in the consolidated statement of financial position at January 1, 2019	541
Current	20
Non-current	521
Total	541

The weighted average incremental borrowing rate applied to lease liabilities recognized in the statement of financial position at the date of initial application was 6.7%.

Expenses relating to short-term leases, including those excluded from the IFRS 16 transition due to the election of the practical expedient, were approximately €14 million for 2019.

The Group's right of use assets are comprised of leased office space. Below is the roll-forward of lease right-of-use assets:

Right of use assets	(in € millions)
Cost	
At January 1, 2019	471
Increases	138
Acquired in business combinations	11
Decreases	(39)
Exchange differences	6
At December 31, 2019	587
Accumulated depreciation	
At January 1, 2019	(75)
Depreciation charge	(42)
Decreases	21
Exchange differences	(2)
At December 31, 2019	(98)
Cost, net accumulated depreciation	
At January 1, 2019	396
At December 31, 2019	489

Below is the maturity analysis of lease liabilities:

Lease liabilities	December 31, 2019
Maturity Analysis	(in € millions)
Less than one year	79
One to five years	317
More than five years	589
Total lease commitments	985
Impact of discounting remaining lease payments	(324)
Lease incentives receivable	(32)
Total lease liabilities	629
Lease liabilities included in the consolidated statement of financial position	
Current	7
Non-current	622
Total	629

- (1) Excluded from the lease commitments above are short-term leases that are not recognized under IFRS 16 based on the Group's election of the practical expedient. Additionally, the Group has entered into certain lease agreements with approximately €19 million of commitments, which have not commenced as of December 31, 2019, and as such, have not been recognized on the consolidated statement of financial position.

The weighted average incremental borrowing rate applied to lease liabilities recognized in the statement of financial position as of December 31, 2019 was 6.4%.

13. Property and equipment

	Property and equipment	Leasehold improvements (in € millions)	Total
Cost			
At January 1, 2018	105	73	178
Additions	3	142	145
Disposals	(46)	(1)	(47)
Exchange differences	(1)	2	1
At December 31, 2018	61	216	277
Additions	20	106	126
Acquired in business combinations	1	5	6
Disposals	(29)	(38)	(67)
Exchange differences	1	6	7
At December 31, 2019	54	295	349
Accumulated depreciation			
At January 1, 2018	(84)	(21)	(105)
Depreciation charge	(12)	(9)	(21)
Disposals	45	—	45
Exchange differences	1	—	1
At December 31, 2018	(50)	(30)	(80)
Depreciation charge	(8)	(21)	(29)
Impairment charge	—	(6)	(6)
Disposals	30	28	58
Exchange differences	(1)	—	(1)
At December 31, 2019	(29)	(29)	(58)
Cost, net accumulated depreciation			
At December 31, 2018	11	186	197
At December 31, 2019	25	266	291

For the year ended December 31, 2019, the Group recognized a €6 million impairment charge on leasehold improvements upon termination of the associated lease agreement.

The Group had €15 million and €100 million of leasehold improvements that were not placed into service as of December 31, 2019 and 2018, respectively.

14. Goodwill and intangible assets

	Internal development costs and patents	Acquired intangible assets	Total (in € millions)	Goodwill	Total
Cost					
At January 1, 2018	18	17	35	135	170
Additions	8	—	8	—	8
Acquisition, business combination (Note 5)	—	3	3	8	11
Exchange differences	—	1	1	3	4
At December 31, 2018	26	21	47	146	193
Additions	19	—	19	—	19
Acquisition, business combination	—	27	27	328	355
Exchange differences	—	(1)	(1)	4	3
At December 31, 2019	45	47	92	478	570
Accumulated amortization					
At January 1, 2018	(6)	(2)	(8)	—	(8)
Amortization charge	(6)	(5)	(11)	—	(11)
At December 31, 2018	(12)	(7)	(19)	—	(19)
Amortization charge	(7)	(9)	(16)	—	(16)
Exchange differences	—	1	1	—	1
At December 31, 2019	(19)	(15)	(34)	—	(34)
Cost, net accumulated amortization					
At December 31, 2018	14	14	28	146	174
At December 31, 2019	26	32	58	478	536

Amortization of €14 million, €11 million and €8 million in 2019, 2018, and 2017, respectively, is included in research and development in the consolidated statement of operations. Research and development costs that are not eligible for capitalization have been expensed in the period incurred.

Goodwill is tested for impairment on an annual basis or when there are indications the carrying amount may be impaired. Goodwill is allocated to the Group's two operating segments, Premium and Ad-Supported, based on the segment that is expected to benefit from the business combination. The Group monitors goodwill at the operating segment level for internal purposes, consistent with the way it assesses performance and allocates resources. The carrying amount of goodwill allocated to each of the operating segments is as follows:

	Premium 2019	Ad-Supported 2019	Premium 2018	Ad-Supported 2018
	(in € millions)			
Goodwill	130	348	128	18

Valuation methodology

The Group performed its annual impairment test in the fourth quarter of 2019. The recoverable amount of the Premium and Ad-Supported operating segments represents fair value less costs of disposal ("FVLCD"). The FVLCD is considered a level 3 fair value based on certain unobservable inputs. FVLCD is calculated using both the income and market approaches. The income approach is calculated by discounting the projected cash flows of each of the operating segments. The market valuation is calculated by applying a median multiple from comparable publicly traded companies to the average revenue of the preceding and forecast twelve months,

before and after the date of the impairment test. As a result of the analysis, the FVLCD for the Premium and Ad-Supported operating segments was determined to be in excess of their carrying amounts.

Key assumptions used in the FVLCD calculations at the impairment testing date

In 2019, the Group weighted the income and market approaches 50% and 50%, respectively, for each of its operating segments. The key assumptions used in the income approach was the discount rate based on the weighted-average cost of capital. The discount rate was 7.5% and 9% for the Group's premium and ad-supported segments, respectively. The key assumptions used in the market approach were the revenue multiples for comparable companies, which were selected, based on industry similarity, financial risk, and size of each of the Group's operating segments. Revenue multiples used in the market approach ranged from 2.5 to 3.5.

There are no reasonably possible changes in the key assumptions that would result in the operating segments' carrying amounts exceeding their recoverable amounts.

15. Restricted cash and other non-current assets

	2019	2018
	(in € millions)	
Restricted cash		
Lease deposits and guarantees	54	52
Other	1	3
Other non-current assets	14	10
	69	65

16. Trade and other receivables

	2019	2018
	(in € millions)	
Trade receivables	305	286
Less: allowance for expected credit losses	(5)	(8)
Less: provision for credit reserves	(3)	(5)
Trade receivables – net	297	273
Other	105	127
	402	400

Trade receivables are non-interest bearing and generally have 30-day payment terms. Due to their comparatively short maturities, the carrying value of trade and other receivables approximate their fair value.

The aging of the Group's net trade receivables is as follows:

	2019	2018
	(in € millions)	
Current	209	195
Overdue 1 – 30 days	51	44
Overdue 31 – 60 days	19	19
Overdue 60 – 90 days	10	7
Overdue more than 90 days	8	8
	297	273

The movements in the Group's allowance for expected credit losses are as follows:

	2019	2018
	(in € millions)	
At January 1	8	15
Provision for expected credit losses	12	15
Reversal of unutilized provisions	(12)	(18)
Receivables written off	(3)	(4)
At December 31	5	8

The Group maintains an allowance for expected credit losses of a portion of trade receivables based on the simplified approach for measuring expected credit losses. The Group estimates anticipated losses based on lifetime expected credit losses at each reporting date. The Group has an established provision matrix which takes into account the number of days past due, collection history, identification of specific customer exposure, product type, geographical region and current economic trends. Expected credit losses on trade receivables are calculated based on the aforementioned matrix and are charged to general and administrative expense in the consolidated statement of operations. Receivables for which an impairment provision was recognized are written off against the provision when it is deemed uncollectible.

The maximum exposure to credit risk at the reporting date is the carrying value of each class of receivables mentioned above. The Group does not hold any collateral as security.

17. Issued share capital and other reserves

As at December 31, 2019, 2018, and 2017, the authorized and subscribed share capital was comprised of 403,032,520, 403,032,520, and 403,001,760 shares, respectively, at a par value €0.000625 each. As at December 31, 2019, 2018, and 2017, the Company had 187,492,667, 183,901,040, and 167,258,400 ordinary shares issued and fully paid, respectively.

The Group has incentive stock plans under which options and restricted stock to subscribe to the Company's share capital have been granted to executives and certain employees. Options exercised or restricted stock vesting under these plans are settled via either the issuance of new shares or issuance of shares from treasury.

On November 13, 2012, the Group entered into an equity financing agreement with new and existing shareholders for the issuance of 4,204,120 ordinary shares for total gross proceeds of €79 million and incurred transaction costs of €3 million in addition to the shares received, the new investors also received contingent options that provided downside protection (meaning that the new investors are eligible to receive additional shares at certain valuations in the event of certain triggering events such as a trade sale, public listing, or liquidation). The contingent options were determined to be embedded derivatives which required separation from the equity issuance. The contingent options recognized as a derivative liability upon issuance were valued at €39 million at December 31, 2012. Upon the direct listing, the contingent options expired at no value.

On November 20, 2013, the Group entered into an equity financing agreement with new investors for the issuance of 8,233,160 shares. On December 19, 2013, the first closing occurred and the Group issued 5,584,160 shares for total gross proceeds of €123 million and incurred transaction costs of €2 million. The second closing occurred on January 17, 2014, whereby 2,649,000 ordinary shares were issued for total gross proceeds of €58 million. In addition to the shares received in December 2013, the new investors also received contingent options that provided downside protection (meaning that the new investors are eligible to receive additional shares at certain valuations in the event of certain triggering events such as a trade sale, public listing, or liquidation). The contingent options were determined to be embedded derivatives, which required separation from the equity issuance. The contingent options recognized as a derivative liability upon issuance were valued at €31 million at December 31, 2013. Upon the direct listing, the contingent options expired at no value.

On April 17, June 9, and July 15, 2015, the Group entered into an equity financing agreement with new and existing shareholders for the issuance of 9,484,880 ordinary shares for total gross proceeds of €479 million and incurred transaction costs of €5 million. In addition to the shares received, the new investors also received contingent options that provided downside protection (meaning that the new investors are eligible to receive additional shares at certain valuations in the event of certain triggering events such as a trade sale, public listing, or liquidation). The contingent options were determined to be embedded derivatives, which required separation from the equity issuance. The contingent options are recognized as a derivative liability and were valued at €87 million upon issuance. Upon the direct listing, the contingent options expired at no value.

On October 17, 2016, the Group issued, for €27 million in cash, warrants to acquire 5,120,000 ordinary shares to certain members of key management. The exercise price of each warrant was US\$50.61, which was equal to 1.2 times the fair market value of ordinary shares on the date of issuance. On October 4, 2019, the Company issued 1,600,000 ordinary shares upon the exercise of 1,600,000 of these warrants, for cash of €74 million. On October 17, 2019, the Company issued 1,991,627 shares upon the effective net settlement of the remaining 3,520,000 warrants.

On July 13, 2017, the Group issued, for €9 million in cash, a warrant to acquire 1,600,000 ordinary shares to a holder that is an employee and a member of management of the Group. The exercise price of each warrant is US\$89.73, which was equal to 1.3 times the fair market value of ordinary shares on the date of issuance. The warrants are exercisable at any time through July 2020.

On December 15, 2017, the Group issued 8,552,440 ordinary shares in exchange for a non-controlling equity interest in TME valued at €910 million. For further details, please see Note 23. The ordinary shares issued are subject to certain transfer restrictions for a period of up to three years from December 15, 2017, subject to limited exceptions, including transfers with the Group's prior consent; transfers to certain permitted transferees; transfers pursuant to a tender offer or exchange offer recommended by the Group's board of directors for a majority of the Group's issued and outstanding securities; transfers pursuant to mergers, consolidations, or other business combination transactions approved by the Group's board of directors; transfers to the Group or any of its subsidiaries; or transfers that are necessary to avoid regulation as an "investment company" under the U.S. Investment Company Act of 1940, as amended.

On December 15 and 29, 2017, the Group entered into exchange agreements with holders of a portion of its Convertible Notes, pursuant to which the Group exchanged an aggregate of US\$411 million in principal of Convertible Notes, plus accrued interest of US\$37 million, for an aggregate of 6,554,960 ordinary shares.

In January 2018, the Group entered into an exchange agreement with holders of the remaining balance of its Convertible Notes, pursuant to which the Group exchanged the remaining of US\$628 million of Convertible Notes, plus accrued interest, for 9,431,960 ordinary shares.

On February 16, 2018, the Company issued 10 beneficiary certificates per ordinary share held of record to entities beneficially owned by the Group's founders, Daniel Ek and Martin Lorentzon. The beneficiary certificates carry no economic rights and are issued to provide the holders of such beneficiary certificates with additional voting rights. The beneficiary certificates, subject to certain exceptions, are non-transferable and shall be automatically canceled for no consideration in the case of sale or transfer of the ordinary share to which they are linked. The Company may issue additional beneficiary certificates under the total authorized amount at the discretion of its Board of Directors, of which the Group's founders are members.

On March 7, 2018, the Company issued 5,740,000 ordinary shares to its Netherlands subsidiary at par value and subsequently repurchased those shares at the same price. These shares are held in treasury in order to facilitate the fulfillment of employee exercises under the Company's ESOP and RSU plans. Similar future transactions are expected to take place to fulfill future option exercises.

On April 3, 2018, the Group completed a direct listing of the Company's ordinary shares on the NYSE. Upon the direct listing, the option for the Convertible Noteholders to unwind the January 2018 exchange transaction expired and, as a result, the Company reclassified the Convertible Notes balance of €1.1 billion to Other paid in capital within Equity.

On November 5, 2018, the Company announced that it would commence a share repurchase program beginning in the fourth quarter of 2018. Repurchases of up to 10,000,000 of the Company's ordinary shares have been authorized by the Company's general meeting of shareholders and the Board of Directors approved such repurchase up to the amount of US\$1.0 billion. The repurchase program will expire on April 21, 2021. Through December 31, 2019, there have been 4,366,427 shares repurchased for €510 million under this program.

On July 1, 2019, the Group issued, for €15 million in cash, a warrant to acquire 800,000 ordinary shares to a holder that is an employee and a member of management of the Group. The exercise price of each warrant is US\$190.09, which was equal to 1.3 times the fair market value of ordinary shares on the date of issuance. The warrants are exercisable at any time through July 1, 2022.

No dividends were paid during the year or are proposed.

All outstanding shares have equal rights to vote at general meetings.

For the year ended December 31, 2019 and 2018, the Company repurchased, in total, 3,679,156 and 6,427,271 of its own ordinary shares, respectively, and reissued 3,557,405 and 3,382,312 treasury shares, respectively, upon the exercise of stock options

and restricted stock units. As of December 31, 2019 and 2018, the Company had 3,166,710 and 3,044,959 ordinary shares held as treasury shares, respectively.

As of December 31, 2019 and 2018, the Group's founders held 378,201,910 and 364,785,640 beneficiary certificates, respectively.

Other reserves

	2019	2018 (in € millions)	2017
Currency translation			
At January 1	(15)	(7)	(4)
Currency translation	4	(6)	(3)
Gains reclassified to consolidated statement of operations	—	(2)	—
At December 31	(11)	(15)	(7)
Short term investments			
At January 1	(4)	(5)	(4)
Gains/(losses) on fair value that may be subsequently reclassified to consolidated statement of operations	7	(2)	(2)
Losses reclassified to consolidated statement of operations	—	2	1
Deferred tax	(2)	1	—
At December 31	1	(4)	(5)
Long term investments			
At January 1	561	(11)	—
(Losses)/gains on fair value not to be subsequently reclassified to consolidated statement of operations	(149)	720	(11)
Deferred tax	32	(148)	—
At December 31	444	561	(11)
Cash flow hedges			
At January 1	(1)	—	—
(Losses)/gains on fair value that may be subsequently reclassified to consolidated statement of operations	(7)	1	—
Losses/(gains) reclassified to revenue	10	(5)	—
(Gains)/losses reclassified to cost of revenue	(7)	3	—
Deferred tax	1	—	—
At December 31	(4)	(1)	—
Share-based payments			
At January 1	334	200	130
Share-based payments (Note 18)	127	88	67
Income tax impact associated with share-based payments (Note 10)	26	48	3
Issuance of share-based payments in conjunction with business combinations (Note 5)	13	—	—
Restricted stock units withheld for employee taxes	(6)	(2)	—
At December 31	494	334	200
Other reserves at December 31	924	875	177

Currency translation reserve comprises foreign exchange differences arising from the translation of the financial statements of foreign operations into the reporting currency.

Short term investment reserve recognizes the unrealized fair value gains and losses on debt instruments held at fair value through OCI.

Long term investment reserve recognizes the unrealized fair value gains and losses on equity instruments held at fair value through OCI.

Cash flow hedge reserve recognizes the unrealized gains and losses on the effective portion of foreign exchange forward contracts designated for hedging.

Share-based payments reserve recognizes the grant date fair value of equity-settled awards provided to employees as part of their remuneration. For further details, please see Note 18.

18. Share-based payments

Employee Stock Option Plans

Under the Employee Stock Option Plans (“ESOP”), stock options of the Company are granted to executives and certain employees of the Group. For options granted prior to January 1, 2016, the exercise price is equal to the fair value of the shares on grant date for employees in the United States and for U.S. citizens and fair value less 30% for the rest of the world. The value of the discount is included in the grant date fair value of the award. For options granted thereafter under these ESOP plans, the exercise price of the options is equal to the fair value of the shares on grant date for all employees. Generally, the first vesting period (13.5% – 25% of the initial grant) is up to one year from the grant date and subsequently vests at a rate of 6.25% each quarter until fully vested. The exercise price for options is payable in the EUR value of a fixed USD amount; therefore, the Group considers these awards to be USD-denominated. The options are generally granted with a term of five years.

During 2019, the Company implemented a new ESOP and Director Stock Option Plan, under which stock options of the Company are granted to executives and employees of the Group and to members of the Company’s Board of Directors, respectively. For options granted under the 2019 plans, the exercise price is equal to the fair value of the ordinary shares on grant date or equal to 150% of the fair value of the ordinary shares on grant date. The exercise price is included in the grant date fair value of the award. The options granted to participants under the 2019 programs have a first vesting period of three or eight months from date of grant and vest monthly or annually thereafter until fully vested. The options are granted with a term of five years.

Restricted Stock Unit Program

During 2019, the Company implemented a new restricted stock unit (“RSU”) program for employees and for members of its Board of Directors. Both are accounted for as equity-settled share-based payment transactions. The RSUs are measured based on the fair market value of the underlying ordinary shares on the date of grant. The RSUs granted to participants under the 2019 programs have a first vesting period of three or eight months from date of grant and vest monthly or annually thereafter until fully vested four years from date of grant. The valuation of the RSUs was consistent with the fair value of the ordinary shares.

Restricted Stock Awards and Other

In connection with an acquisition during 2017, the Group issued 61,880 restricted stock awards (“RSAs”) to certain employees of the acquiree. Vesting of the RSAs is contingent on continued employment of these employees. The awards are accounted for as equity-settled share-based payment transactions. The RSAs vest over a two- and three-year period from the acquisition date. The valuation of the RSAs was consistent with the fair value of the ordinary shares.

In connection with the acquisition of Anchor during the first quarter of 2019, the Company granted 162,320 equity instruments to certain employees of Anchor. Each instrument effectively represents one ordinary share of the Company, which will be issued to the holder upon vesting. The instruments vest annually over a four-year period from the acquisition date, and vesting of the instruments is contingent on continued employment. The instruments are accounted for as equity-settled share-based payment transactions and are measured based on the fair market value of the underlying ordinary shares on the date of grant. The grant date fair value of each equity instrument was US\$145.21.

Activity in the RSUs, RSAs, and other contingently issuable shares outstanding and related information is as follows:

	RSUs		RSAs		Other	
	Number of RSUs	Weighted average grant date fair value US\$	Number of Awards	Weighted average grant date fair value US\$	Number of Awards	Weighted average grant date fair value US\$
Outstanding at January 1, 2017	501,480	36.73	—	—	—	—
Granted	80,920	59.63	61,880	90.65	—	—
Forfeited	(85,903)	37.43	—	—	—	—
Released	(300,560)	38.95	—	—	—	—
Outstanding at December 31, 2017	195,937	42.46	61,880	90.65	—	—
Granted	14,383	168.24	—	—	—	—
Forfeited	(15,991)	34.93	—	—	—	—
Released	(93,946)	40.12	—	—	—	—
Outstanding at December 31, 2018	100,383	63.87	61,880	90.65	—	—
Granted	715,224	137.15	—	—	162,320	145.21
Forfeited	(48,754)	118.96	—	—	—	—
Released	(128,503)	98.52	(20,600)	90.65	—	—
Outstanding at December 31, 2019	638,350	134.79	41,280	90.65	162,320	134.15

In the table above, the number of RSUs released include ordinary shares that the Group has withheld for settlement of employees' tax obligations due upon the vesting of RSUs.

Activity in the stock options outstanding and related information is as follows:

	Options	
	Number of options	Weighted average exercise price US\$
Outstanding at January 1, 2017	10,976,480	36.88
Granted	5,819,520	64.11
Forfeited	(659,000)	46.34
Exercised	(1,422,520)	22.23
Expired	(67,760)	28.49
Outstanding at December 31, 2017	14,646,720	48.73
Granted	3,578,000	142.20
Forfeited	(1,220,508)	62.82
Exercised	(4,736,555)	40.97
Expired	(24,131)	54.98
Outstanding at December 31, 2018	12,243,526	77.63
Granted	4,152,565	147.11
Forfeited	(719,860)	105.01
Exercised	(3,478,660)	49.41
Expired	(43,799)	117.79
Outstanding at December 31, 2019	12,153,772	107.68
Exercisable at December 31, 2017	5,822,400	39.62
Exercisable at December 31, 2018	5,162,876	58.25
Exercisable at December 31, 2019	5,553,650	84.18

The weighted-average contractual life for the stock options outstanding at December 31, 2019, 2018, and 2017 is 2.9 years, 2.9 years, and 3.3 years, respectively. The weighted-average share price at exercise for options exercised during 2019, 2018, and 2017 was US\$141.82, US\$152.33, and US\$57.53, respectively. The weighted-average fair value of options granted during the year ended at December 31, 2019, 2018, and 2017 was US\$34.63 per option, US\$39.23 per option, and US\$18.05 per option, and, respectively.

The stock options outstanding December 31, 2019, 2018, and 2017 are comprised of the following:

			2019		2018		2017	
Range of exercise prices (US\$)			Number of options	Weighted average remaining contractual life (years)	Number of options	Weighted average remaining contractual life (years)	Number of options	Weighted average remaining contractual life (years)
1.65	to	45.00	2,130,161	0.9	4,753,052	1.8	9,039,248	2.7
45.01	to	90.00	2,482,270	2.2	3,337,414	3.2	4,736,432	4.2
90.01	to	135.00	2,946,838	3.4	2,695,890	3.9	871,040	4.2
135.01	to	180.00	3,318,423	4.1	749,360	4.3	—	—
180.01	to	233.42	1,276,080	3.7	707,810	4.2	—	—
			12,153,772	2.9	12,243,526	2.9	14,646,720	3.3

In determining the fair value of the employee share-based awards, the Group uses the Black-Scholes option-pricing model. The Company does not anticipate paying any cash dividends in the near future and therefore uses an expected dividend yield of zero in the option valuation model. The expected volatility is based on the historical volatility of public companies that are comparable to the Group over the expected term of the award. The risk-free rate is based on U.S. Treasury zero-coupon rates as the exercise price is based on a fixed USD amount. The expected life of the stock options is based on historical data and current expectations.

The following table lists the inputs to the Black-Scholes option-pricing models used for employee share-based payments for the years ended December 31, 2019, 2018, and 2017:

	2019	2018	2017
Expected volatility (%)	30.1 – 35.2	32.0 – 34.7	32.0 – 43.5
Risk-free interest rate (%)	1.4 – 2.6	2.4 – 2.9	1.4 – 2.0
Expected life of stock options (years)	2.5 – 4.8	2.4 – 4.4	2.4 – 4.4
Weighted-average share price (US\$)	136.09	142.20	64.11

Valuation assumptions are determined at each grant date and, as a result, are likely to change for share-based awards granted in future periods. Changes to the input assumptions could materially affect the estimated fair value of share-based payment awards.

The sensitivity analysis below shows the impact of increasing and decreasing expected volatility by 10% as well as the impact of increasing and decreasing the expected life by one year. This analysis was performed on stock options granted in 2019. The following table shows the impact of these changes on stock option expense for the options granted in 2019:

	2019 (in € millions)
Actual stock option expense	48
Stock option expense increase (decrease) under the following assumption changes	
Volatility decreased by 10%	(13)
Volatility increase by 10%	13
Expected life decrease by 1 year	(9)
Expected life increase by 1 year	8

The expense recognized in the consolidated statement of operations for employee share-based payments is as follows:

	2019	2018 (in € millions)	2017
Cost of revenue	4	3	2
Research and development	61	40	21
Sales and marketing	27	19	15
General and administrative	30	26	27
	<u>122</u>	<u>88</u>	<u>65</u>

19. Convertible notes and borrowings

Convertible Notes

On April 1, 2016, the Group issued US\$1,000 million principal amount of Convertible Notes due in 2021. The notes were issued at par and bore interest of 5.0% payment-in-kind interest increasing by 100 basis points every six months after two years. Upon a specified conversion event occurring, the Convertible Notes would convert into ordinary shares at a conversion rate reflecting a conversion price equal to the lesser of a price cap per share or a discount of 20.0% to the per share price of the Company's ordinary shares. If a specified conversion event did not occur within twelve months, the discount would increase by 250 basis points and then again, every six months thereafter until a specified conversion event did occur. A direct listing was not considered a specified conversion event. The terms also included change of control clauses where the notes holders had the option to convert into ordinary shares. At maturity, if the notes had not yet been converted or repaid, note holders would receive cash in an amount equal to the original principal amount plus 10% annualized return.

The transaction costs of approximately US\$20 million were effectively immediately expensed in finance costs.

The Convertible Note agreements included certain affirmative covenants, including the delivery of audited consolidated financial statements to the holders.

On December 15, 2017, holders of a portion of the Group's Convertible Notes exchanged US\$301 million in principal of Convertible Notes, plus accrued interest of US\$27 million, for 4,800,000 ordinary shares. The Convertible Notes were recorded at fair value on the date of exchange, which was reclassified to equity upon issuance of the ordinary shares. The fair value at exchange was based on secondary market transactions of US\$600 million between note holders and a third party.

On December 27, 2017, the Group entered into an exchange agreement with holders of a portion of its Convertible Notes, pursuant to which the Group exchanged an aggregate of US\$110 million in principal of Convertible Notes, plus accrued interest of US\$10 million, for an aggregate of 1,754,960 ordinary shares as of December 29, 2017. The Convertible Notes were recorded at fair value on the date of exchange, which was reclassified to equity upon issuance of the ordinary shares. The fair value at exchange of US\$211 million was based on the ordinary share fair value as at December 31, 2017.

In January 2018, the Group entered into an exchange agreement with holders of the remaining balance of its Convertible Notes, pursuant to which the Group exchanged the remaining of US\$628 million of Convertible Notes, plus accrued interest, for 9,431,960 ordinary shares. Pursuant to this exchange agreement, subject to certain conditions, if the Company failed to list its ordinary shares on or prior to July 2, 2018, the Group had agreed to offer to each noteholder the option to unwind the transaction such that the Group purchases back the shares that were issued to such noteholder pursuant to the exchange and would have issued such noteholder a new note that is materially identical to its note prior to the exchange. The option to unwind the exchange if a listing did not occur by July 2, 2018 met the definition of a contingent settlement event, and resulted in the issued equity shares ("Converted Notes") being classified as a financial liability in the statement of financial position until the option to unwind expired due to a direct listing or the passage of time.

On April 3, 2018, the Group completed a direct listing of the Company's ordinary shares on the NYSE. Upon the direct listing, the option for the Convertible Noteholders to unwind the January 2018 exchange transaction expired and, as a result, the Group recorded an expense of €123 million within finance costs to mark to market the Convertible Notes to the fair value based on the closing price of the Company's ordinary shares on April 3, 2018. The Company then reclassified the Convertible Notes balance of €1.1 billion to Other paid in capital within Equity.

20. Trade and other payables

	2019	2018
	(in € millions)	
Trade payables	377	295
Value added tax and sales taxes payable	148	118
Other current liabilities	24	14
	<u>549</u>	<u>427</u>

Trade payables generally have a 30-day term and are recognized and carried at their invoiced value, inclusive of any value added tax that may be applicable.

21. Accrued expenses and other liabilities

	2019	2018
	(in € millions)	
<i>Non-current</i>		
Deferred rent	—	85
Other accrued liabilities	20	—
	<u>20</u>	<u>85</u>
<i>Current</i>		
Accrued fees to rights holders	1,153	832
Accrued salaries, vacation, and related taxes	54	41
Accrued social costs for options and RSUs	64	64
Other accrued expenses	167	139
	<u>1,438</u>	<u>1,076</u>
	<u>1,458</u>	<u>1,161</u>

During the year ended December 31, 2018, the Group recorded an accrual for fees to rights holders of €12 million that relates to prior years.

22. Provisions

	Legal contingencies	Other (in € millions)	Total
Carrying amount at January 1, 2018	53	12	65
Charged/(credited) to the consolidated statement of operations:			
Additional provisions	—	5	5
Exchange differences	3	—	3
Utilized	(17)	(8)	(25)
Carrying amount at December 31, 2018	39	9	48
Charged/(credited) to the consolidated statement of operations:			
Additional provisions	11	5	16
Reversal of unutilized amounts	—	(3)	(3)
Exchange differences	2	—	2
Utilized	(47)	(1)	(48)
Carrying amount at December 31, 2019	5	10	15
As at December 31, 2018			
Current portion	39	3	42
Non-current portion	—	6	6
As at December 31, 2019			
Current portion	5	8	13
Non-current portion	—	2	2

Legal contingencies

Various legal actions, proceedings, and claims are pending or may be instituted or asserted against the Group. The results of such legal proceedings are difficult to predict and the extent of the Group's financial exposure is difficult to estimate. The Group records a provision for contingent losses when it is both probable that a liability has been incurred, and the amount of the loss can be reasonably estimated.

Between December 2015 and January 2016, two putative class action lawsuits were filed against Spotify USA Inc. in the U.S. District Court for the Central District of California, alleging that the Group unlawfully reproduced and distributed musical compositions without obtaining licenses. These cases were subsequently consolidated in May 2016 and transferred to the U.S. District Court for the Southern District of New York in October 2016, as *Ferrick et al. v. Spotify USA Inc.*, No. 1:16-cv-8412-AJN (S.D.N.Y.). In May 2017, the parties reached a signed class action settlement agreement pursuant to which the Group will be responsible for (i) a US\$43 million cash payment to a fund for the class, (ii) all settlement administration and notice costs, expected to be between US\$1 million to US\$2 million, (iii) a direct payment of class counsel's attorneys' fees of up to US\$5 million dollars, (iv) future royalties for any tracks identified by claimants, as well as other class members who provide proof of ownership following the settlement, and (v) reserving future royalties for unmatched tracks. On May 22, 2018, the court granted final approval of the settlement. All appeals of the court's final approval have been dismissed, and the April 15, 2019 deadline for appellants to appeal to the U.S. Supreme Court has passed, and thus the settlement is now effective.

Since July 2017, six lawsuits alleging unlawful reproduction and distribution of musical compositions have been filed against the Group in (i) the U.S. District Court for the Middle District of Tennessee (*Bluewater Music Services Corporation v. Spotify USA Inc.*, No. 3:17-cv-01051; *Gaudio et al. v. Spotify USA Inc.*, No. 3:17-cv-01052; *Robertson et al. v. Spotify USA Inc.*, No. 3:17-cv-01616; and *A4V Digital, Inc. et al. v. Spotify USA Inc.*, 3:17-cv-01256), (ii) in the U.S. District Court for the Southern District of Florida (*Watson Music Group, LLC v. Spotify USA Inc.*, No. 0:17-cv-62374), and (iii) the U.S. District Court for the Central District of California (*Wixen Music Publishing Inc. v. Spotify USA, Inc.*, 2:17-cv-09288). The complaints sought an award of damages, including the maximum statutory damages allowed under U.S. copyright law of US\$150,000 per work infringed. The *Wixen v. Spotify* lawsuit was voluntarily dismissed on December 20, 2018 after the parties reached a mutual settlement. The *Watson v. Spotify* lawsuit was voluntarily dismissed on April 24, 2019 following the resolution of all appeals of the *Ferrick* class action settlement. As of December 31, 2019, the *Robertson v. Spotify*, *Bluewater v. Spotify*, *Gaudio v. Spotify*, and *A4V v. Spotify* lawsuits have all been dismissed.

Other

The Group has obligations under lease agreements to return the leased assets to their original condition. An obligation to return the leased asset to their original condition upon expiration of the lease is accounted for as asset retirement obligations. The obligations are expected to be settled at the end of the lease terms. The Group has indirect tax provisions which relate primarily to potential non-income tax obligations in various jurisdictions. The Group recognizes provisions for claims or indirect taxes when it determines that an unfavorable outcome is probable and the amount of loss can be reasonably estimated. These provisions are recognized as general and administrative expenses.

23. Financial risk management and financial instruments

Financial risk management

The Group's operations are exposed to financial risks. To manage these risks efficiently, the Group has established guidelines in the form of a treasury policy that serves as a framework for the daily financial operations. The treasury policy stipulates the rules and limitations for the management of financial risks.

Financial risk management is centralized within Treasury who are responsible for the management of financial risks. Treasury manages and executes the financial management activities, including monitoring the exposure of financial risks, cash management, and maintaining a liquidity reserve, and it provides certain financial services to the Group's entities. Treasury operates within the limits and policies authorized by the Board of Directors.

Capital management

The Group's objectives when managing capital (cash and cash equivalents, short term investments, equity, and, until April 2018, Convertible Notes) is to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and to maintain an optimal capital structure to reduce the cost of capital. The Group's capital structure and dividend policy is decided by the Board of Directors. Treasury continuously reviews the Group's capital structure considering, amongst other things, market conditions, financial flexibility, business risk, and growth rate.

On November 5, 2018, Spotify Technology S.A. announced that it would commence a share repurchase program beginning in the fourth quarter of 2018. Repurchases of up to 10,000,000 of the Company's ordinary shares have been authorized by the Company's general meeting of shareholders and the Board of Directors approved such repurchase up to the amount of US\$1.0 billion. The repurchase program will expire on April 21, 2021. The timing and actual number of shares repurchased depends on a variety of factors, including price, general business and market conditions, and alternative investment opportunities. The repurchase program is executed consistent with the Group's capital allocation strategy of prioritizing investment to grow the business over the long term. Under the repurchase program, repurchases can be made from time to time using a variety of methods, including open market purchases, all in compliance with the rules of the Commission and other applicable legal requirements. The repurchase program does not obligate the Company to acquire any particular amount of ordinary shares, and the repurchase program may be suspended or discontinued at any time at the Company's discretion. The Group uses current cash and cash equivalents and the cash flow it generates from operations to fund the share repurchase program.

The Group is not subject to any externally imposed capital requirements.

Credit risk management

Financial assets carry an element of risk that counterparties may be unable to fulfill their obligations. This exposure arises from the investments in liquid funds of banks and other counterparties. The Group mitigates this risk by adopting a risk averse approach in relation to the investment of surplus cash. The main objectives for investments are first, to preserve principal and secondarily, to maximize return given the rules and limitations of the treasury policy. Surplus cash is invested in counterparties and instruments considered to carry low credit risk. Investments are subject to credit rating thresholds and at the time of investment, no more than 10% of surplus cash can be invested in any one issuer (excluding certain government bonds and investments in cash management banks). The weighted-average maturity of the portfolio shall not be greater than 2 years, and the final maturity of any investment is not to exceed 5 years. The Group shall maintain the ability to liquidate the majority of all short term investments within 90 days. At December 31, 2019 and 2018, the financial credit risk was equal to the consolidated statement of financial position value of cash and cash equivalents and short term investments of €1,757 million and €1,806 million, respectively. No credit losses were incurred during 2019 or 2018 on the short term investments.

The credit risk with respect to the Group's trade receivables is diversified geographically and among a large number of customers, private individuals, as well as companies in various industries, both public and private. The majority of the Group's revenue is paid monthly in advance significantly lowering the credit risk incurred for these specific counterparties. Solvency information is generally required for credit sales within the Ad sales and Partner subscription business to minimize the risk of bad debt losses and is based on information provided by credit and business information from external sources.

Liquidity risk management

Liquidity risk is the Group's risk of not being able to meet the short term payment obligations due to insufficient funds. The Group has internal control processes and contingency plans for managing liquidity risk. A centralized cash pooling process enables the Group to manage liquidity surpluses and deficits according to the actual needs at the group and subsidiary level. The liquidity management takes into account the maturities of financial assets and financial liabilities and estimates of cash flows from operations.

The Group's policy is to have a strong liquidity position in terms of available cash and cash equivalents, and short term investments.

	2019	2018
	(in € millions)	
Liquidity		
Short term investments	692	915
Short term deposits	585	307
Cash at bank and on hand	480	584
Total surplus liquidity	1,757	1,806
Liquidity position	1,757	1,806

Currency risk management

Transaction exposure relates to business transactions denominated in foreign currency required by operations (purchasing and selling) and/or financing (interest and amortization). The Group's general policy is to hedge a portion of its transaction exposure on a case-by-case basis under the Group's cash-flow hedging program by entering into multiple foreign exchange forward contracts. The Group does not enter into foreign exchange forward contracts greater than one year. The Group's currency pairs used for cash flow hedges are Euro / U.S. dollar, Euro / Australian dollar, Euro / British pound, Euro / Swedish krona, Euro / Canadian dollar, and Euro / Norwegian krone. Translation exposure relates to net investments in foreign operations. The Group does not conduct translation risk hedging.

(i) Transaction exposure sensitivity

In most cases, the Group's customers are billed in their respective local currency. Major payments, such as salaries, consultancy fees, and rental fees are settled in local currencies. Royalty payments are primarily in EUR and USD. Hence, the operational need to net purchase foreign currency is due primarily to a deficit from such settlements.

The table below shows the immediate impact on net loss before tax of a 10% strengthening in the closing exchange rate of significant currencies to which the Group had exposure, at December 31, 2019 and 2018. The impact on net loss is due primarily to monetary assets and liabilities in a transactional currency other than the functional currency of a subsidiary within the Group. The sensitivity associated with a 10% weakening of a particular currency would be equal and opposite. This assumes that each currency moves in isolation.

2019	SEK	USD
	(in € millions)	
(Increase)/decrease in loss before tax	(13)	121
2018	SEK	USD
	(in € millions)	
(Increase)/decrease in loss before tax	—	74

(ii) Translation exposure sensitivity

Translation exposure exists due to the translation of the results and financial position of all of the Group entities that have a functional currency different from the presentation currency of Euro. The impact on the Group's equity would be approximately €50 million and €12 million if the EUR weakened by 10% against all translation exposure currencies, based on the exposure at December 31, 2019 and 2018, respectively.

Interest rate risk management

Interest rate risk is the risk that changes in interest rates will have a negative impact on the Group's earnings and cash flow. Prior to the Group's direct listing, the fair value of the Group's Convertible Notes was dependent on market interest rates, which might have negatively impacted earnings. The Convertible Notes were re-measured at each reporting date using valuation models using input data, which included market interest rates. Changes in the fair value of the Convertible Notes were recognized in finance income or cost in the consolidated statement of operations. An increase in market interest rates would have decreased the value of the Convertible Notes. The Group did not enter into any hedging arrangement to mitigate these fluctuations.

The Group's exposure to interest rate risk also is related to its interest-bearing assets, primarily its debt securities held at fair value through other comprehensive income. Fluctuations in interest rates impact the yield of the investment. The sensitivity analysis considered the historical volatility of short term interest rates and determined that it was reasonably possible that a change of 100 basis points could be experienced in the near term. A hypothetical 100 basis points increase in interest rates would have impacted interest income by €6 million and €8 million for the years ended December 31, 2019 and 2018, respectively.

Financing risk management

The Group finances its operations through external borrowings, equity, and cash flow from operations. The funding strategy has been to diversify funding sources. Historically, the external debt consisted of the Convertible Notes and finance leases.

Share price risk management

Share price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in the fair value of the Company's ordinary share price. The Group's exposure to this risk relates primarily to the outstanding warrants.

The warrants are re-measured at each reporting date using valuation models using input data based on the Company's share price. Changes in the fair value of these instruments are recognized in finance income or cost. An increase of share price will increase the value of the warrants. The Group has not entered into any hedging arrangement to mitigate these fluctuations.

Other share price risk

Social costs are payroll taxes associated with employee salaries and benefits, including share-based compensation that the Group is subject to in various countries in which the Group operates. Social costs are accrued at each reporting period based on the number of vested stock options and awards outstanding, the exercise price, and the Company's share price. Changes in the accrual are recognized in operating expenses. An increase in share price will increase the accrued expense for social costs, and when the share price decreases, the accrued expense will become a reduction in social costs expense, all other things being equal, including the number of vested stock options and exercise price remaining constant. The impact on the accrual for social costs on outstanding share based payment awards of an increase or decrease in the Company's ordinary share price of 10% would result in a change of €14 million and €11 million at December 31, 2019 and December 31, 2018, respectively.

Investment risk

The Group is exposed to investment risk as it relates to changes in the market value of its long term investments, due primarily to volatility in the share price used to measure the investment and exchange rates. The majority of the Group's long term investments relate to TME.

Insurance risk management

Insurance coverage is governed by corporate guidelines and includes a common package of different property and liability insurance programs. The business is responsible for assessing the risks to decide the extent of actual coverage. Treasury manages the common Group insurance programs.

Financial instruments

Foreign exchange forward contracts

Cash flow hedges

The notional principal of the foreign exchange contracts was approximately €1,538 million and €968 million as of December 31, 2019 and 2018, respectively. The following table summarizes the notional principal of the foreign currency exchange contracts by hedged line item in the statement of operations as of December 31, 2019:

	Notional amount in foreign currency					
	Australian dollar (AUD)	British pound (GBP)	Canadian dollar (CAD)	Norwegian krone (NOK)	Swedish krona (SEK)	U.S. dollar (USD)
	(in millions)					
Hedged line item in consolidated statement of operations						
Revenue	226	328	194	739	1,221	38
Cost of revenue	176	242	141	499	832	29
Total	402	570	335	1,238	2,053	67

The following table summarizes the notional principal of the foreign currency exchange contracts by hedged line item in the statement of operations as of December 31, 2018:

	Notional amount in foreign currency			
	Australian dollar (AUD)	British pound (GBP)	Swedish krona (SEK)	U.S. dollar (USD)
	(in millions)			
Hedged line item in consolidated statement of operations				
Revenue	187	282	1,112	27
Cost of revenue	143	202	757	21
Total	330	484	1,869	48

Non designated hedges

In the first quarter of 2018, the Group effectively closed its positions in foreign exchange forward contracts not designated as hedges and recognized a gain of €8 million in finance income associated with the changes in fair value of these instruments. The Group had no such instruments outstanding as of December 31, 2019, and 2018. For the years ended December 31, 2019 and 2018, the gain associated with the changes in fair value of these instruments was €0 million and €8 million, respectively.

Fair values

The carrying amounts of certain financial instruments, including cash and cash equivalents, trade and other receivables, restricted cash, trade and other payables, and accrued expenses and other liabilities approximate fair value due to their relatively short maturities. The Group measures its lease liabilities as described in Note 2. All other financial assets and liabilities are accounted for at fair value.

The following tables summarize, by major security type, the Group's financial assets and liabilities that are measured at fair value on a recurring basis, and the category using the fair value hierarchy. The different levels have been defined in Note 2.

Financial assets and liabilities by fair value hierarchy level	Level 1	Level 2 (in € millions)	Level 3	December 31, 2019
Financial assets at fair value				
Short term investments:				
Government securities	229	39	—	268
Agency securities	—	5	—	5
Corporate notes	—	263	—	263
Collateralized reverse purchase agreements	—	156	—	156
Derivatives (designated for hedging):				
Foreign exchange forwards	—	8	—	8
Long term investments	1,481	—	16	1,497
Total financial assets at fair value by level	1,710	471	16	2,197
Financial liabilities at fair value				
Derivatives (not designated for hedging):				
Warrants	—	—	98	98
Derivatives (designated for hedging):				
Foreign exchange forwards	—	13	—	13
Contingent consideration	—	—	27	27
Total financial liabilities at fair value by level	—	13	125	138

Financial assets and liabilities by fair value hierarchy level	Level 1	Level 2 (in € millions)	Level 3	December 31, 2018
Financial assets at fair value				
Short term investments:				
Government securities	164	57	—	221
Agency securities	—	7	—	7
Corporate notes	—	343	—	343
Collateralized reverse purchase agreements	—	344	—	344
Derivatives (designated for hedging):				
Foreign exchange forwards	—	6	—	6
Derivatives (not designated for hedging):				
Other	—	—	2	2
Long term investments	1,630	—	16	1,646
Total financial assets at fair value by level	1,794	757	18	2,569
Financial liabilities at fair value				
Derivatives (not designated for hedging):				
Warrants	—	—	333	333
Derivatives (designated for hedging):				
Foreign exchange forwards	—	6	—	6
Total financial liabilities at fair value by level	—	6	333	339

The Group's policy is to recognize transfers into and transfers out of fair value hierarchy levels at the end of each reporting period. During the years ended December 31, 2019 and 2018 there were no transfers between levels in the fair value hierarchy other than the Group's long term investment in TME, as noted below.

Recurring fair value measurements

Long term investment – Tencent Music Entertainment Group

The Group's approximate 8% investment in TME is carried at fair value through other comprehensive income. Prior to December 12, 2018, the fair value of unquoted ordinary shares of TME had been estimated using unquoted TME market transactions, the latest fair value per ordinary share disclosed within TME's initial registration statement on Form F-1 filed with the SEC and other unobservable inputs. Subsequent to December 12, 2018, the fair value of ordinary shares of TME is based on the ending NYSE American depository share price. Accordingly, the entire balance of the Group's investment in TME of €1,630 million was transferred from level 3 to level 1 within the fair value hierarchy in accordance with IFRS 7. The fair value of the long term investments may vary over time and is subject to a variety of risks including: company performance, macro-economic, regulatory, industry, USD to Euro exchange rate and systemic risks of the equity markets overall.

The table below presents the changes in the investment in TME:

	2019	2018	2017
	(in € millions)		
At January 1	1,630	910	—
Equity issued in exchange for long term investment	—	—	910
Changes in fair value recorded in other comprehensive loss	(149)	720	—
At December 31	1,481	1,630	910

The impact on the fair value of the Group's long term investment in TME using reasonably possible alternative assumptions with an increase or a decrease of TME's share price used to value its equity interests of 10% results in a range of €1,333 million to €1,629 million at December 31, 2019 and €1,467 million to €1,793 million at December 31, 2018.

The following sections describe the valuation methodologies the Group uses to measure its Level 3 financial instruments at fair value on a recurring basis.

Fair value of ordinary shares

On April 3, 2018, the Group completed a direct listing of the Company's ordinary shares on the NYSE. The fair value of the Company's ordinary shares subsequent to the direct listing is based on the NYSE closing ordinary share price of the Group.

The valuation of certain items in the consolidated financial statements prior to the direct listing was consistent with the Group's use of the Probability Weighted Expected Return Method ("PWERM") to value the Company's ordinary shares.

The fair value of the ordinary shares prior to the direct listing was determined using recent secondary market transactions in the Company's ordinary shares and the PWERM, which is one of the recommended valuation methods to measure fair value in privately held companies with complex equity structures in the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Under this method, discrete future outcomes, including as a public company, non-public company scenarios, and a merger or sale, are weighted based on estimates of the probability of each scenario. In the Group's application of this method, five different future scenarios are identified (high and low case public company, high and low case transaction, and private company). For each scenario, an equity value is calculated based on revenue multiples, derived from listed peer companies, which are applied on different (scenario-dependent) forecasted revenue. For the private company scenario, a discounted cash flow method also is considered in determining the equity value. Ordinary share values are weighted by the probability of each scenario in the valuation model. In addition, an appropriate discount adjustment is incorporated to recognize the lack of marketability due to being a closely held entity. Finally, the impact on the share value of recent financing and secondary trading is considered.

The following weightings, up until the Group's direct listing, were applied to each valuation method:

	2018	2017
PWERM	50%	50 – 80%
Secondary market transactions	50%	20 – 50%

The PWERM valuations, up until the Group's direct listing, weighted the different scenarios as follows:

	2018	2017
Market Approach – High Case Public Company	55 – 70%	25 – 40%
Market Approach – Low Case Public Company	28 – 35%	35%
Market Approach – High Case Transaction	0 – 3%	4 – 6%
Market Approach – Low Case Transaction	0 – 2%	4 – 6%
Private Case – Income and Market Approaches	2 – 5%	5 – 30%

The key assumptions used to estimate the fair value of the ordinary shares and contingent options using the PWERM, up until the Group's direct listing, were as follows:

	2018	2017
Revenue multiple used to estimate enterprise value	3.0	2.2 – 4.6
Discount rate (%)	13.0	13.0 – 19.5
Volatility (%)	32.5 – 35.0	30.0 – 37.5

Warrants

On October 17, 2016, the Company sold, for €27 million, warrants to acquire 5,120,000 ordinary shares to certain holders that are employees and management of the Group. The exercise price of each warrant is US\$50.61, which was equal to 1.2 times the fair market value of ordinary shares on the date of issuance.

On July 13, 2017, the Company sold, for €9 million, a warrant to acquire 1,600,000 ordinary shares to certain holders that are employees and management of the Group. The exercise price of each warrant is US\$89.73, which was equal to 1.3 times the fair market value of ordinary shares on date of issuance. The warrants are exercisable at any time through July 2020.

On July 1, 2019, the Company sold, for €15 million, warrants to acquire 800,000 ordinary shares to Mr. Ek, through D.G.E. Investments Limited, an entity indirectly wholly owned by him. The exercise price of each warrant is US\$190.09, which was equal to 1.3 times the fair market value of ordinary shares on the date of issuance. The warrants are exercisable at any time through July 1, 2022.

On October 4, 2019, the Company issued 1,600,000 ordinary shares upon the exercise of 1,600,000 warrants that were granted on October 17, 2016, for cash of €74 million. On October 17, 2019, the Company issued 1,991,627 shares upon the effective net settlement of the remaining 3,520,000 warrants that were granted on October 17, 2016. Refer to Note 25.

The outstanding warrants are measured on a recurring basis in the consolidated statement of financial position and are Level 3 financial instruments recognized at fair value through the consolidated statement of operations. The warrants are valued using a Black-Scholes option-pricing model, which includes inputs determined from models that include the value of the Company's ordinary shares, as determined above and additional assumptions used to estimate the fair value of the warrants in the option pricing model as follows:

	2019	2018	2017
Expected term (years)	0.5 – 2.5	0.8 – 1.5	0.9 – 1.1
Risk free rate (%)	1.58 – 1.59	2.55 – 2.58	1.71 – 1.76
Volatility (%)	32.5	40.0	30.0
Share price (US\$)	149.55	113.50	120.50

The table below presents the changes in the warrants liability:

	2019	2018 (in € millions)	2017
At January 1	333	346	34
Issuance of warrant for cash	15	—	9
Issuance of shares upon exercise of, or net settlement of, warrants	(303)	—	—
<i>Non cash changes recognized in profit or loss</i>			
Changes in fair value	35	(39)	313
Effect of changes in foreign exchange rates	18	26	(10)
At December 31	98	333	346

The warrant liability is included in derivative liabilities on the consolidated statement of financial position. The change in estimated fair value is recognized within finance income or costs in the consolidated statement of operations.

The impact on the fair value of the warrants with an increase or decrease in the Company's ordinary share price of 10% results in a range of €75 million to €127 million at December 31, 2019 and €273 million to €399 million at December 31, 2018.

Contingent consideration

On April 1, 2019, the Group acquired Parcast, a premier storytelling podcast studio. A contingent consideration was included in the purchase consideration of the acquisition. Included in the purchase price was €13 million related to the estimated fair value of contingent consideration. The contingent consideration is valued by the Group using a simulation of user engagement outcomes. The maximum potential contingent consideration payout is €43 million over the next three years. The change in the fair value of the contingent consideration is recognized within general and administrative expenses in the consolidated statement of operations.

The table below presents the changes in the contingent consideration liability:

	2019 (in € millions)
At January 1	—
Initial recognition of contingent consideration included in purchase consideration of acquisition	13
<i>Non cash changes recognized in profit or loss</i>	
Changes in fair value	14
At December 31	27

Convertible Notes

On April 3, 2018, the Group completed a direct listing of the Company's ordinary shares on the NYSE, and the option for the Convertible Noteholders to unwind the January 2018 exchange transaction expired. As a result, the Group recorded an expense of €123 million within finance costs to mark to market the Convertible Notes to the fair value based on the closing price of the Company's ordinary shares on April 3, 2018. The Company then reclassified the Convertible Notes balance of €1.1 billion to Other paid in capital within Equity. Refer to Note 19.

The table below presents the changes in the Convertible Notes:

	2018 (in € millions)	2017
At January 1	944	1,106
<i>Non cash changes recognized in profit or loss</i>		
Changes in fair value	221	666
Effect of changes in foreign exchange rates	(20)	(142)
Issuance of shares upon exchange of Convertible Notes	(1,145)	(686)
At December 31	—	944

The change in estimated fair value is recognized within finance costs in the consolidated statement of operations.

24. Commitments and contingencies

Obligations under leases

On January 1, 2019, the Group recognized right-of-use assets for non-cancellable operating lease arrangements, except for short-term leases excluded from the IFRS 16 transition due to the election of the practical expedient. Refer to Note 12.

The future minimum lease payments under non-cancellable operating leases, prior to the adoption of IFRS 16, as at December 31, were as follows:

	2018	2017
Not later than one year	62	47
Later than one year but not more than 5 years	288	244
More than 5 years	483	478
	<u>833</u>	<u>769</u>

Total lease expenses were €79 million and €52 million for the years ended December 31, 2018 and 2017, respectively.

Commitments

The Group is subject to the following minimum guarantees relating to the content on its service, the majority of which relate to minimum royalty payments associated with its license agreements for the use of licensed content, as at December 31:

	2019	2018 (in € millions)	2017
Not later than one year	657	548	1,060
Later than one year but not more than 5 years	383	152	635
	<u>1,040</u>	<u>700</u>	<u>1,695</u>

In addition to the minimum guarantees listed above, the Group is subject to various non-cancelable purchase obligations and service agreements with minimum spend commitments of €200 million over the next 2 years, the majority of which relate to a service agreement with Google for the use of Google Cloud Platform.

Contingencies

Various legal actions, proceedings, and claims are pending or may be instituted or asserted against the Group. These may include but are not limited to matters arising out of alleged infringement of intellectual property; alleged violations of consumer regulations; employment-related matters; and disputes arising out of supplier and other contractual relationships. As a general matter, the music and other content made available on the Group's service are licensed to the Group by various third parties. Many of these licenses allow rights holders to audit the Group's royalty payments, and any such audit could result in disputes over whether the Group has paid the proper royalties. If such a dispute were to occur, the Group could be required to pay additional royalties, and the amounts involved could be material. The Group expenses legal fees as incurred. The Group records a provision for contingent losses when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. An unfavorable outcome to any legal matter, if material, could have an adverse effect on the Group's operations or its financial position, liquidity, or results of operations.

On February 25, 2019, Warner/Chappell Music Limited (“WCM”) filed a lawsuit against the Group in the High Court of Bombay, India, alleging that the Group sought to exploit WCM’s copyrights in musical compositions in India without obtaining a license. On January 13, 2020, WCM and the Group resolved the dispute, and on January 14, 2020, the High Court of Bombay, India, disposed of the lawsuit. On April 22, 2019, Saregama India Limited filed a lawsuit against the Group in the High Court of Delhi, India, alleging copyright infringement, and has sought injunctive relief. Any unfavorable outcome could harm the Group’s business in India. The Group intends to vigorously defend this action.

As of April 2019, the Group’s settlement of the *Ferrick et al. v. Spotify USA Inc.*, No. 1:16-cv-8412-AJN (S.D.N.Y.), putative class action lawsuit, which alleged that the Group unlawfully reproduced and distributed musical compositions without obtaining licenses, was final and effective. Even with the effectiveness of the settlement, the Group may still be subject to claims of copyright infringement by rights holders who have purported to opt out of the settlement or who may not otherwise be covered by its terms. The Music Modernization Act of 2018 contains a limitation of liability with respect to such lawsuits filed on or after January 1, 2018. Rights holders may nevertheless file lawsuits, and may argue that they should not be bound by this limitation of liability. For example, in August 2019, the *Eight Mile Style, LLC et al v. Spotify USA Inc.*, No. 3:19-cv-00736-AAT, lawsuit was filed against the Group in the U.S. District Court for the Middle District of Tennessee, alleging both that the Group does not qualify for the limitation of liability in the Music Modernization Act and that the limitation of liability is unconstitutional and thus not valid law. The Group intends to vigorously defend this lawsuit, including plaintiffs’ challenges to the limitation of liability in the Music Modernization Act.

25. Related party transactions

Key management compensation

Key management includes members of the Company’s senior management and the board of directors. The compensation paid or payable to key management for Board and employee services includes their participation in share-based compensation arrangements. The disclosure amounts are based on the expense recognized in the consolidated statement of operations in the respective year.

	2019	2018 (in € millions)	2017
Key management compensation			
Short term employee benefits	5	4	4
Share-based payments	22	19	17
Termination benefits	—	1	1
	<u>27</u>	<u>24</u>	<u>22</u>

On July 1, 2019, the Company issued, for €15 million, warrants to acquire 800,000 ordinary shares to Mr. Ek, through D.G.E. Investments Limited, an entity indirectly wholly owned by him. The exercise price of each warrant is US\$190.09, which was equal to 1.3 times the fair market value of ordinary shares on the date of issuance. The warrants are exercisable at any time through July 1, 2022.

On October 4, 2019, the Company issued 1,600,000 ordinary shares and 16,000,000 beneficiary certificates to Mr. Ek, through D.G.E. Investments Limited, upon the exercise of 1,600,000 warrants that were granted on October 17, 2016, for cash of €74 million.

On October 17, 2019, the Company issued 905,285 ordinary shares and 9,052,850 beneficiary certificates to Mr. Ek, through D.G.E. Investments Limited, upon the effective net settlement of the remaining 1,600,000 warrants that were granted on October 17, 2016.

On October 17, 2019, the Company issued 1,086,342 ordinary shares and 10,863,420 beneficiary certificates to Martin Lorentzon, a member of the Board of Directors of the Company, through Rosello Company Limited, an entity indirectly wholly owned by him, upon the effective net settlement of 1,920,000 warrants that were granted on October 17, 2016.

26. Group information

The Company's principal subsidiaries as at December 31, 2019 are as follows:

Name	Principal activities	Proportion of voting rights and shares held (directly or indirectly)	Country of incorporation
Spotify AB	Main operating company	100%	Sweden
Spotify USA Inc.	USA operating company	100%	USA
Spotify Ltd	Sales, marketing, contract research and development, and customer support	100%	UK
Spotify Norway AS	Sales and marketing	100%	Norway
Spotify Spain S.L.	Sales and marketing	100%	Spain
Spotify GmbH	Sales and marketing	100%	Germany
Spotify France SAS	Sales and marketing	100%	France
Spotify Netherlands B.V.	Sales and marketing	100%	Netherlands
Spotify Canada Inc.	Sales and marketing	100%	Canada
Spotify Australia Pty Ltd	Sales and marketing	100%	Australia
Spotify Brasil Serviços De Música LTDA	Sales and marketing	100%	Brazil
Spotify Japan K.K.	Sales and marketing	100%	Japan
Spotify India LLP	Sales and marketing	100%	India
Spotify Singapore Pte Ltd.	Marketing	100%	Singapore

There are no restrictions on the net assets of the Group companies.

27. Events after the reporting period

Subsequent to year-end, the Group entered into an agreement to acquire Bill Simmons Media Group, LLC. for cash consideration totaling approximately €130 to €180 million, a portion of which is deferred, subject to closing adjustments.

Subsequent to year-end, the Group signed license agreements with certain music labels and publishers and podcast agreements with creators. Included in these agreements are minimum guarantee and spend commitments of approximately €186 million over the next three years.